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ABSTRACT

Presented are 11 invited papers on career education for gifted and talented students. An introduction to career education and to the gifted and talented is provided in two papers, of which one paper is on current status and approaches in career education, and the other is on current status and approaches to the gifted and talented. Considered in three basic background papers are the future of work, identification and characteristics of gifted and talented students, and career development problems of gifted and talented students. Discussed in the next two papers are value considerations in career education for gifted and talented students. Exemplary programs in career education for the gifted and talented are described in the next chapter. The final section examines implications for curriculum guidelines in career education for gifted and talented students in three papers on the following topics: policy considerations, additional viewpoints on policy considerations, and curricular considerations. (DB)

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CAREER EDUCATION FOR GIFTED AND TALENTED STUDENTS

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FOREWARD

Dr. Sidney P. Marland, Jr., Assistant Secretary for Education, Department of Health, Education, and Welfare, has received national and international recognition for the emphasis he has given to career education as an approach to educational reform for the American educational system. Dr. Marland's professional interests, in addition to career education, include a deep and longstanding concern for education of gifted and talented persons. It is thus understandable why, in early 1972, Dr. Marland expressed special interest in encouraging activities related to career education for the gifted and talented. This book can be traced directly, in its historical background, to Dr. Marland's own professional interest in the subject.

The book itself represents the final product and report of a grant from the United States Office of Education (OEG-0-72-4843) to the University of Maryland extending from June 15, 1972, through July 13, 1973. Initial impetus leading to awarding of this grant stemmed from collaborative efforts of Dr. Elizabeth J. Simpson, Bureau of Adult, Vocational, and Technical Education, United States Office of Education, and Dr. Hal Lyon, Office of the Gifted and Talented, United States Office of Education. Dr. Simpson and Dr. Lyon developed a preliminary outline covering the proposed scope of work for this project. The University of Maryland responded to this outline with a grant proposal which was subsequently granted, using funds from the Curriculum Guidelines Branch, Bureau of Adult, Vocational and Technical Education, United States Office of Education. The goal of the project, as stated in the grant award itself, was to develop materials that could serve as curriculum guidelines in career education for gifted and talented students. The Project Officer assigned to this project was Dr. Elizabeth J. Simpson and the Project Monitor was Ms. Marion Craft. Project Co-Directors at the University of Maryland were Dr. Kenneth B. Hoyt and Dr. Jean R. Hebeler.

The project plan called for the following steps: a) Identifying and soliciting national leaders in seven specified areas of education to participate in

the project; b) Conducting a First National Invitational Seminar on Career Education for Gifted and Talented Students for purposes of discussing the concept and formulating topical areas for further study; c) Assigning topics to various experts considered capable of knowledgeable writing with respect to each topic formulated by seminar members; d) Conducting a Second National Invitational Seminar on Career Education for Gifted and Talented Students devoted primarily to critiquing the first drafts of the invited papers; e) Securing final copies of invited papers; and f) Editing and assembling the invited papers, along with those prepared by the Project Co-Directors in form for publication. This project plan was followed.

Persons to be invited as seminar participants were selected by the Project Co-Directors in consultation with personnel from the Curriculum Guidelines Branch and the Office of the Gifted and Talented, United States Office of Education. Seminar members who attended one or both of the seminars included:

From the field of education of the gifted and talented:

Dr. Miriam Goldberg
Teachers College, Columbia University

Dr. Joseph Renzulli
University of Connecticut

Dr. Dorothy Sisk
University of South Florida

Mr. Lyn McLain
Washington, D. C., Youth Symphony Orchestra

From the field of philosophy of education

Dr. Philip Phenix
Teachers College, Columbia University

Dr. Jack Willers
George Peabody College for Teachers

From the field of curriculum

Dr. Glenys Unruh
University City (Missouri) Public Schools

Dr. Paul Klohr
Ohio State University

From the field of vocational education

Dr. Rupert Evans
University of Illinois

Dr. Gordon Swanson
University of Minnesota

From the field of career development

Dr. Edwin Herr
Pennsylvania State University

Dr. Marshall Sanborn
University of Wisconsin

From the field of educational innovation and new thrusts

Dr. David MacMichael
Stanford Research Institute

Dr. Leonard Finkelstein
Philadelphia Parkway School

Dr. Garth Mangum
University of Utah

In addition to these official seminar members, several other persons were invited as observers to the seminars and were encouraged to take part in the seminar discussions at certain points. These persons include: a) Mr. Frank Carricato, Principal, Winston Churchill Senior High School, Montgomery County, Maryland; b) Ms. Waveline Starnes, Teacher Education Center Coordinator, University of Maryland-Montgomery County; c) Ms. Ruth Burkins, Instructional Supervisor, Howard County (Maryland) Schools; d) Ms. Nancy Pinson and Niel Carey, Maryland State Department of Education; e) Dr. Hal Lyon, Ms. Jane Williams, Ms. Anna Jean Skinner, Ms. Elizabeth Neuman, and Ms. Marian Banner, Office of the Gifted and Talented, USOE; f) Dr. Elizabeth J. Simpson and Ms. Marion Craft, Bureau of Adult, Vocational and Technical Education, USOE; g) Mr. Peter Plantec, Operations Research, Incorporated; and h) Dr. Sidney P. Marland, Jr., Department of Health, Education and Welfare. Each of these "observers" made valuable, substantive contributions to the seminar discussions.

The first seminar, held October 15-17, 1972, at the University of Maryland, was spent in a largely unstructured discussion of the scope and substance of the general

problem of providing career education for gifted and talented students. Seminar participants agreed, prior to conclusion of the three days, on a tentative set of topics on which special papers were to be prepared and on the names of persons who were to be invited to prepare such papers. The entire seminar was recorded, and later transcribed, by Secrephone of Jenkintown, Pennsylvania.

Between November, 1972, and March, 1973, invited papers on topics suggested at the first seminar were prepared by a number of persons and distributed for study and reaction to all seminar members. The second seminar, held March 3-5, 1973, was devoted primarily to a critique of the drafts of the prepared papers. Those persons who prepared invited papers, but had not been official members of the first seminar, were officially invited to participate in the second seminar. The final afternoon of the second seminar was devoted to an informal interchange of ideas on the subject with Dr. Sidney P. Marland, Jr., Assistant Secretary for Education, Department of Health, Education, and Welfare. As with the first seminar, the second was also recorded and transcribed by Secrephone.

Following the second seminar, final copies of all invited papers were submitted to the Project Co-Directors. Using these papers, transcripts from the two seminars, and their own background, the Project Co-Directors edited the papers, made additions taken from seminar transcripts, and wrote some sections of their own. The result is this book.

In addition to the seminar participants, observers, writers of papers, and personnel from several parts of the United States Office of Education, special thanks and acknowledgement must be given to two people. One is Ms. Marion Craft who, as Project Monitor, devoted many, many hours of her own personal time to helping the Project Co-Directors over the many obstacles they faced in carrying out this project. The second is Ms. Carol B. Crump, Administrative Assistant to K. Hoyt at the University of Maryland who, in addition to handling all administrative details associated with this project, also took responsibility for final assembly and reproduction of this manuscript.

PREFACE

This book is the product of a set of invited papers, comments made by seminar members in the National Invitational Seminars on Career Education for Gifted and Talented Students held at the University of Maryland October 15-17, 1972, and March 3-5, 1973, and the writing and editing efforts of the Project Co-Directors.

It is divided in five sections. In Section A, we seek to provide a basic conceptual background in career education for readers who may not have been exposed to this area. In addition, we seek to provide a similar basic conceptual background in education of the gifted and talented for those readers unfamiliar with that field. Because we anticipate readers from both of these basic areas, we felt it advisable to present an overview of each of these two fields. Dr. Hoyt wrote Chapter I and Dr. Hebeler wrote Chapter II.

In Section B, we present three background chapters. Because of the crucial importance of work in the career education concept, we felt a need for a substantive paper addressed to the topic of "The Future of Work". That paper was prepared by Dr. Garth L. Mangum and appears with very minor editorial comments on our part as Chapter III. The second topic, concerned with "Identification and Characteristics of Gifted and Talented Students" appears as Chapter IV and represents edited excerpts combined from invited papers submitted by Dr. Edwin L. Herr, Dr. Joseph Renzulli, and Dr. Marshall Sanborn. Chapter V, as it appears here, represents primarily an edited version of the invited paper submitted by Dr. Marshall Sanborn coupled with comments from seminar members summarized by the co-editors of this book.

Section C concerns itself with value considerations in career education for gifted and talented persons. Chapter VI represents, in its entirety, an invited paper submitted by Dr. Philip Phenix. Chapter VII represents attempts on the part of this book's co-editors to combine portions of invited papers submitted by Dr. Edwin L. Herr and Dr. Jack Willers with comments of seminar members derived from study of transcripts of the seminars.

Section D is entirely devoted to a narrative description of exemplary programs in career education for gifted and talented students. Major responsibility for preparation of Chapter VIII was assumed by Ms. Waveline Starnes and Ms. Ruth Burkins who wrote this chapter based on materials they had collected. In writing this chapter, they were greatly assisted by portions of the invited paper submitted by Dr. Edwin L. Herr along with the many examples of exemplary programs that Dr. Herr collected.

Section E contains three chapters directly concerned with implications for curriculum guidelines in career education for gifted and talented students. Chapter IX represents totally the contribution of Dr. Rupert Evans and Dr. Ralph A. Smith. Chapter X is drawn from the invited paper submitted by Dr. Edwin L. Herr along with edited comments from seminar members taken from the transcripts of the six days of seminar discussions. Finally, Chapter XI represents an invited paper prepared especially for this book by Ms. Waveline Starnes and Ms. Ruth Burkins.

Specific contributions of the writers of all invited papers have been noted here in an attempt to provide each with the great amount of credit due him or her. Because of the wishes expressed by seminar participants, the name of no specific writer appears at the beginning of any given chapter. It is hoped that these remarks will help interested readers identify those persons responsible for any good ideas they find themselves receiving from this book. The co-editors, while wishing to see that full and complete credit goes to all who contributed to the contents of this book, do not wish to see any of the many contributors blamed for the extensive editing and additional writing that we have done. Hopefully, the above explanation will enable the reader to blame the co-editors for any perceived lack of organization, consistent style, or comprehensiveness of coverage.

Kenneth B. Hoyt and Jean Hebeler

Project Co-Directors

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Section A: Introduction to Career Education and to the Gifted and Talented

Chapter I -- Career Education: Current Status and Approaches

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THE CAREER EDUCATION MOVEMENT: CURRENT STATUS AND APPROACHES

Introduction

The call for educational reform can be heard in almost all parts of the country today. It is clearly evident in the Fifth Report of the National Advisory Council on Vocational and Technical Education which contains these words:

> "There is an educational consumer revolt developing in our land today . . . Public officials responsible for education, both elected and appointed, need to be reminded of Alexander Hamilton's statement, 'Here, Sir, the people govern . . .'" (NACVE, 1971)

In a speech entitled "Career Education -- 300 Days Later" delivered at the 1971 American Vocational Association Convention in Portland, Oregon, Dr. Sidney P. Marland, Jr., then USOE Commissioner, declared:

> "What I have tried to indicate to you this evening is that career education is not a major OE priority in name only, a paper goal; career education is the major objective of the Office of Education at this moment in time and will remain so for the foreseeable future." (Marland, 1972)

As of the beginning of FY 1974, career education continues as the major single response of the United States Office of Education to this national call for educational reform.

To a major extent "career education" symbolizes the confluence of many ideas which transcend a universally applicable standard definition. Nevertheless, the model building efforts and position statements since 1971 provide frames of reference from which to extrapolate operational meanings of the term.

This chapter has been written primarily for the benefit of those who have not yet become acquainted with the career education concept. It seeks to provide a selective set of statements concerning career education as well as a number of references for further reading. The final portion of this chapter presents one conceptual model for career education that conveys the biases of the two major authors of this book.

Assistant Secretary of Education Sidney P Marland, Jr.

While promoting career education as the major single vehicle for educational reform, Dr. Sidney P. Marland, Jr., has refrained from voicing a single definition of career education. Instead, he has wisely chosen to allow a wide variety of definitions

to be hammered out within the educational community itself and in other segments of society. This is not to say that Marland has, in any way, backed down from active participation in the conceptual debate. On the contrary, he has published numerous papers on the subject including the following, each of which is obtainable from the U. S. Office of Education.

Marland, Sidney P., Jr. "Career Education". Presentation before session of the International Conference on Education, 33rd, Geneva, Switzerland, September 15-23, 1971.

_____ "Career Education -- A New Frontier". Speech presented before the Third Annual Conference of the Pennsylvania Personnel and Guidance Association, Pittsburgh, Pennsylvania, November 15, 1971.

_____ "Career Education: Three Speeches by the Commissioner". Washington, D. C: Office of Education, Department of Health, Education, and Welfare. December, 1971.

_____ "Career Education: 300 Days Later". Speech presented at the American Vocational Association Convention, Portland, Oregon, December, 1971.

_____ "Career Education: Every Student Headed for a Goal". American Vocational Journal, Vol. 47, No. 3 (March, 1972).

_____ "Marland on Career Education". Reprinted from American Education (November, 1971).

In searching Dr. Marland's writings for a single statement that would provide a capsule summary of his point of view the closest seems to be stated as follows:

> " . . . what the term 'career education' means to me is basically a point of view, a concept -- a concept that says three things; first, that career education will be part of the curriculum for all students, not just some. Second, that it will continue throughout a youngster's stay in school, from the first grade through senior high and beyond, if he so elects. And third, that every student leaving school will possess the skills necessary to give him a start to making a livelihood for himself and his family, even if he leaves before completing high school."

A second statement from Dr. Marland's writings sheds some further light on his position:

> " . . . Career education, in sum, would reflect a far broader understanding of the purpose of education in today's highly sophisticated, technical, change-oriented society -- the need not only to fit a person to function efficiently, but to make him aware of why is doing what he is doing . . . and to bring relevance to our classrooms for many who, with reason, now find learning meaningless."

The two statements quoted above were selected in an attempt to demonstrate the broad, pervasive, humanistic view of career education that Dr. Marland appears to hold. With such a broad view, it should be readily understandable why Dr. Marland has also voiced considerable interest in and support for increased emphasis on the gifted and talented as persons who should be among those who benefit from the career education movement.

United States Office of Education

The United States Office of Education has officially endorsed no single definition of career education. However, a Commissioner's Committee on Defining Career Education was established in 1971 that derived several possible definitions. Apparently, the definition that received the most attention from that Committee was:

> "Career education is the infusion into all educational curriculum and student counseling, K through 14, of information and hands-on experience pertinent to real life jobs and world of work experience. The main thrust of career education is to prepare all students for a successful life of work by improving the basis for occupational choice, by facilitating the acquisition of job skills, and most important by enhancing educational achievement in all subject areas and at all levels through making education more meaningful and relevant to the aspirations of students. Career education recognizes the critical decision points in life when students must be prepared and equipped to decide whether to pursue a job or further education or some combination of both work and education."

Various professional persons within the United States Office of Education have provided further clarification of the meaning of career education through expressing their personal views on the topic. Since the individual views of top professionals within the United States Office of Education are sure to be important in action decisions made by USOE as a whole, the following are quoted:

First, a quotation from Dr. Elizabeth Simpson, Curriculum Guidelines Branch, U. S. Office of Education:

> "Career education is education for a profession or other occupation demanding special preparation. Education for a career includes the idea of preparing for educational advancement. It has the following components:
> -- Orientation to the world of work
> -- Knowledge concerning occupational possibilities and career ladders
> -- Occupational skills and related knowledge and abilities
> -- Attitudes conducive to occupational responsibility

-- Moral and ethical values related to career choice, occupational performance, and the social and economic implications of the career field
-- Knowledge and abilities related to general employability -- personal development, human relationships, nutrition, consumer education, management of resources, and responsible parenthood." (Simpson, 1972)

Second, a quote from Dr. Duane Mattheis, Deputy Commissioner for School Systems, United States Office of Education, who has stated the following objectives for career education:

1. Provide students with a more unifying, relevant curriculum; infuse academic and general curriculum course offerings with career relevance; and channeling of students into tracks.

2. Provide educational experiences to give students increasing knowledge of occupational alternatives and the world of work. This experience should begin in elementary school and continue as long as needed.

3. Provide nonacademic career options (at secondary, postsecondary, and adult levels) which have equal status with academic career options. The unfairly discriminating distinctions between the academic track and the vocational track must be eliminated.

4. Provide students with a comprehensive and flexible program of career qualifying opportunities -- one that will allow students to progress at their own pace and yet will not lock them into a particular track. It should increase the options available at the secondary and postsecondary levels through greater breadth of course offerings, more meaningful content (jobs with a future) and availability of different types of learning modes.

5. Provide for greater involvement of employers in the educational experience of all students. Employers can make an important contribution through work-study and cooperative education programs, involvement in occupational guidance, career orientation, and placement activities, and in employer conducted alternatives to the "in school house"education.

6. Provide students with career counseling that begins early in the educational program and follows through to job placement or further education. While the system should be built on the principle of maximizing individual choice, students should be provided with options that are realistically related to labor market conditions. A job placement function should be located in the schools.

7. Provide opportunity for counseling, for re-entry, and retraining for those who have exited the system -- both for those who have failed to gain employment and for those in the world of work. Individuals whose skills are no longer marketable, those in dead-end jobs, and those who want to make a career change for personal happiness should be able to re-enter the system.

8. Provide its graduates from the secondary level and each level thereafter with either the skills to enter the world of work or to embark on additional education. Many career options will require education beyond the secondary level, and the system should provide this experience. The criterion should be that at the exit point for each career option the student is qualified to enter that career.

9. Provide the consumers of career education with a role in its design and implementation. If individuals are to gain greater self autonomy and control over their destinies, it is important they be involved in the planning and development of career education.

10. Provide students with some notion of what is wrong with the world of work, particularly the way jobs are structured. Simply preparing students to accept the occupational system is insufficient.

11. Provide students with credentials that overcome discriminating distinctions both in school and in the society at large. Give credits for vocational courses that are of equal value to those given for college preparatory courses. For those whose work performance qualifies them, give credentials of competitive value for educational or career options. This will require an active role in seeking to change the credentialing procedures for entry into the world of work. (Mattheis, 1972)

Third, the following quotations, from an article found in the April, 1973, issue of American Education and written by Dr. William F. Pierce, Deputy Commissioner for Occupational and Adult Education, USOE, appear worthy of note in this book:

> "This in essence is what the career education approach is all about; to reform and refocus education so that what is taught in the classroom has a clear, demonstrable bearing on the student's future plans -- whether these plans be to find a job immediately, go on to college or graduate school . . . or to enter the world of work for a time and then return to education . . . to enable the student to go forward secure in the knowledge that he or she is prepared to deal with the world on its own terms." (Pierce, 1973)

Since USOE career education activities are officially housed in the Bureau that Dr. Pierce heads, it is refreshing to see the broad, flexible view he expresses.

Operationally, the United States Office of Education has implemented the career education concept primarily through supporting at least one exemplary local program in each state and territory of the United States. These programs have been supported in part by funds from Part D -- Exemplary Programs of the Vocational Education Amendments of 1968. The first round of Part D funding saw approximately 60 local programs established to operate during Fiscal Years 70, 71 and 72. With a total expenditure of 22.5 million dollars, these local projects produced a wide variety of career education definitions and practices during their three years of operation. A second round of Part D funding found 52 projects funded for FY 73, 74 and 75 at an anticipated cost of $8 million per year. In addition to these, Part C VEA funds (Commissioner's discretionary funds) were used in both FY 72 and 73 in the amount of nine

million dollars per year with 56 new programs launched in FY 72 and an additional 56 in FY 73. Both the Part C and the Part D career education program efforts, coordinated under the able leadership of Dr. Sidney High, USOE, have contributed greatly to building both the concepts and the competencies required for the success of the career education movement.

A related significant effort within USOE has been the work of the Curriculum Guidelines Branch, USOE, headed by Dr. Elizabeth Simpson. This branch has funded a wide variety of efforts (including the seminars leading to production of this book) designed to foster the development of curriculum guidelines for career education at all levels of education.

The branches of USOE headed by Dr. Simpson and Dr. High have both been a part of the Bureau of Adult, Vocational and Technical Education (BAVTE) under the direction of Dr. Robert Worthington. Dr. Worthington has, since the inception of the career education movement, been one of the most forceful and effective spokesmen for career education in the nation. With BAVTE becoming, as a result of the Education Amendments of 1972, a part of the new Bureau of Occupational and Adult Education, and career education being assigned organizationally to that Bureau, it seems likely that continuing high levels of leadership in the career education movement can be expected to emanate from the United States Office of Education.

National Institute of Education

With passage of the Education Amendments of 1972, the National Institute of Education was created. NIE has established a Career Education Task Force headed by Dr. Corinne H. Rieder. In April, 1973, the NIE Career Education Task Force published a draft document (for discussion purposes only) entitled Forward Plan for Career Education Research and Development. At the time of this writing, this document, while still officially "unofficial", represented the prime source of statements on career education that have come from NIE. The following quotations, taken from this draft document, were selected to illustrate what appears to represent the consensus of NIE's Career Education Task Force (even though it cannot be correctly viewed as

official NIE policy until acted upon by NIE's National Council on Educational Research).

> "The initial emphasis for the NIE career education R & D program will be the responsiveness of career education to the problems people experience in finding the right jobs and advancing within them"
>
> " . . . More specifically, career education is defined as the development of knowledge and of special and general abilities to help individuals and groups interact with the economic sector"
>
> "Economic and psychological incomes from employment comprise the long term outcomes which are proper questions for research and development. In other words, NIE will begin its career education efforts by concentrating on how people earn their livings"
>
> " . . . to address these kinds of problems for <u>all</u> persons would be unrealistic. Limited R & D resources will be directed at two target groups most affected by problems of career entry and progression; youth and midcareer adults, particularly women"
>
> "The NIE role in career education will have several facets . . . it seems appropriate that the Institute should . . . provide national leadership in defining and describing career education"

The first four of the five quotations listed above would not be particularly bothersome were it not for the last one. It is obvious that the NIE definition of career education contained in this draft document is considerably more narrow and restrictive in scope than concepts from either Assistant Secretary of Education Marland or USOE leaders quoted earlier. While a narrowing of focus certainly is understandable from the standpoint of practical management of an R & D effort, it would be most unfortunate if the NIE definition of career education contained in this document were considered in any way as an illustration of "providing national leadership in defining and describing career education".

In addition to its new R & D efforts in career education, NIE has also been given responsibility for the four career education models that were previously housed in the United States Office of Education. These models include: a) Model I -- School Based Model; b) Model II -- Employer Based Model; 3) Model III -- Home Based Model; and d) Model IV -- Residential Model. Brief excerpts from the NIE description of these four models presented in the <u>Forward Plan</u> document follow:

"Model I -- The Center for Vocational and Technical Education at the Ohio State University is the prime Model I contractor . . . Associated with the Center are six local school district sites . . . The major problem focus of the project is youth's alleged lack of preparedness for employment, further study, and adult life. The project attempts to reform the curriculum of the established public school system by infusing career development concepts into the entire K-12 curriculum . . ."

"Model II -- . . . There are four Model II contractors: Appalachia Educational Laboratory; Far West Laboratory for Research and Development; Northwest Regional Educational Laboratory; and Research for Better Schools, Inc. Model II projects are designing a comprehensive alternative to the public secondary school . . . When fully developed, this model will provide comprehensive data on the benefits and limitations of utilizing educational opportunities within economic institutions . . . "

"Model III -- The Education Development Center, Inc. (EDC) conducts the only Model III project. . . working . . . with the problems of adults and adolescents who are neither employed nor in school . . . not attempting to teach skills and attitudes directly . . . designed to inform individuals about existing work and training opportunities in the community and to apply mass communication media to the outreach and assessment of the career interests of selected home-bound populations"

"Model IV -- developed by the Mountain Plains Education and Economic Development Program, Inc. . . . focuses on chronically underemployed multi-problem rural families. It represents a "total" intervention in that it attempts to influence all significant activities of the family, not only education-related activities . . . "

Although raising some major difficulties associated with these four models in their current form, the NIE document referred to above makes it clear that the current models will continue to be a central element of program development activities. In addition, NIE contemplates a wide variety of other new research activities designed to provide new research knowledge fitting the conceptual scheme for career education that NIE envisions.

Additional Attempts to Define and Conceptualize Career Education

The conceptualization of career education has, in no way, been limited to USOE or NIE personnel. Official definitions of "career education" have been adopted by more than 20 state boards of education throughout the country as well as by several hundred local boards of education. In addition, several leaders have emerged in the career education movement, each of whom has come forth with his or her own tentative definition of "career education." Definitions of several such leaders are quoted [illegible] of making their differences clear.

Goldhammer, Keith, and Robert E. Taylor in Career Education: Perspective and Promise. Columbus, Ohio: C. E. Merrill Publishing Company, 1972.

> "Specifically, career education is designed to capacitate individuals for their several life roles; economic, community, home, avocational, religious, and aesthetic . . . Designed for all students, career education should be viewed as lifelong and pervasive . . . Career education is a systematic attempt to increase the career options available to individuals and to facilitate more rational and valid career planning and preparation. Through a wide range of school and community-based resources, young people's career horizons should be broadened. Their self-awareness should be enhanced."

Herr, Edwin L. in Review and Synthesis of Foundations for Career Education. Washington, D. C: U. S. Government Printing Office, 1972.

> "Different efforts to operationalize career education responses suggest that the term can mean at least the following: 1) An effort to diminish the separateness of academic and vocational education; 2) An area of concern which has some operational implications for every educational level or grade from kindergarten through graduate school; 3) A process of insuring that every person exiting from the formal educational structure has job employability skills of some type; 4) A direct response to the importance of facilitating individual choice-making so that occupational preparation and the acquisition of basic academic skills can be coordinated with developing individual preference; 5) A way of increasing the relevance or meaningfulness of education for greater numbers of students; 6) A design to make education a truly open system for both youth and adults; 7) A structure whose desired outcomes necessitate cooperation among all elements of education as well as among the school, industry, and community; 8) An enterprise requiring new technologies and materials of education; and 9) A form of education for all students."

Evans, Rupert in Career Education: What It Is And How To Do It. Salt Lake City: Olympus Publishing Company, 1972.

> "Career education is the total effort of the community to develop a personally satisfying succession of opportunities for service through work, paid or unpaid, extending throughout life."

Smith, Wesley, Former Director of Vocational Education, California State Department of Education

> "Career education is a comprehensive, systematic, and cohesive plan of learning organized in such a manner that youth at all grade levels in the public schools will have continuous and abundant opportunity to acquire useful information about the occupational structure of the economy, the alternatives of career choice, the obligations of individual and productive involvement in the total work force, the requisites of all occupations, and opportunities to prepare for gainful employment . . . It is a priority objective of public education, with achievement measured by employability in occupations, both gainful and useful, that are a reasonable match of both talent and the ambition of every citizen."

Costar, John, Director, Center for Occupational Education, North Carolina State University

> "Career education has as its mission the attainment of an optimum level of work proficiency for each individual within the context of the social, individual, and work systems. Career education: 1) facilitates the acqusition and processing and integration of information by the individual; 2) enhances the decision-making progress; 3) provides alternatives for action through programs that are designed to equip the individual with salable skills to start his/her career; and 4) provides for continuous recycling of information, decision-making, and action through retraining and upgrading of skills."

Venn, Grant in "Career Education in Perspective: Yesterday, Today, and Tomorrow", NASSP Bulletin, 1973, 57, No. 371, March, 1973.

> "Career education is not a program, a course, a method, or a specific educational reform that will save education or solve all its problems. It is a concept, an approach to learning that represents expanded options for youth in school and renewal opportunities for those who have stopped school or are employed. It is a way to provide actual experience in real life situations, relating education to our future careers and offering motivation for learning in school while developing skills which are salable."

Hoyt, K. B. in Career Education: What It Is and How To Do It. Salt Lake City: Olympus Publishing Company, 1972.

> "Career education is defined as the total effort of public education and the community aimed at helping all individuals to become familiar with the values of a work-oriented society, to integrate these values into their personal value systems, and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual."

Those who wish to read extended discussions of definitions such as quoted above are referred to the following brief list of publications, each of which is viewed here as representing a major contribution to the emerging literature of career education.

American Vocational Journal. "Career Education: Is It a Fad or a Major Development?" Entire Issue. Volume 47, No. 3, March, 1972.

Goldhammer, Keith and Robert Taylor. Career Education: Perspective and Promise. Columbus, Ohio: C. E. Merrill Publishing Company, 1972.

Hoyt, K. B., R. Evans, E. Mackin, and G. Mangum. Career Education: What It Is and How to Do It. Salt Lake City: Olympus Publishing Company, 1972.

Hoyt, K. B., N. Pinson, D. Laramore, and G. Mangum. Career Education and the Elementary School Teacher. Salt Lake City: Olympus Publishing Company, 1973.

Career Education Resource Guide. General Learning Corporation. Morristown,

Keller, Louise. Career Education In-Service Training Guide. Morristown, New Jersey: General Learning Corporation, 1972.

McClure, Larry and Carolyn Buan (Editors). Essays on Career Education. Portland, Oregon: Northwest Regional Educational Laboratory, 1973. (For sale by Superintendent of Documents, Government Printing Office, Washington, D. C. Stock No. 1780-01147)

National Association of Secondary School Principals Bulletin. "Career Education: What It's All About." Entire issue. Vol. 57, No. 371, March, 1973.

Morgan, Robert L. and Mollie W. Shook (Editors). Career Education Monograph Series. Raleigh, N. C: North Carolina State University, 1973.

Herr, Edwin L. Review and Synthesis of Foundations for Career Education. Washington, D. C: U. S. Government Printing Office, 1972.

Those readers who study the basic references, concepts and definitions presented so far in this chapter will quickly discover great variation in philosophy and methodology existing among those who claim some expertise in the emerging (or, as some would say, the "re-emerging") field of career education.

A Conceptual View of Career Education

At this point, an attempt will be made to present a conceptual view of career education that is admittedly sketchy and incomplete. In spite of its incompleteness, it is hoped that the view presented here may provide a basic rationale for a comprehensive career education effort that includes provision for gifted and talented persons as well as all other persons in the society. With the definitions and references presented earlier in this chapter, those readers who find themselves rejecting the conceptual view presented here can surely find another that is more congenial to them.

A separate portion of this book is devoted to basic value issues and considerations important in one's conceptual view of career education. Here, an attempt will be made to argue from only a single set of values. Again, those whose personal values differ from those expressed here may find a conceptual view of career education for themselves based on ways in which they resolve the basic value issues to be presented later.

The value base utilized in this presentation rests on the centrality of work in the career education concept. The definition of "work" used here is crucial to under-

standing the rationale. Almost equally important will be the definitions of "career", "education", and "leisure". It is contended here that, at this point in time, it is vital that we rid ourselves of what are regarded as false assumptions regarding each of these four words. If we can do so and, as a result, establish more appropriate meanings for these words, career education can be conceptualized both as it operates within the educational structure and in the larger society.

The Societal Case for Career Education

It is contended here that no major change ever has, or ever should, come to American education based solely on conditions existing with the formal educational structure itself. Rather, change should come to education as a result of the changing role and function of education in the larger society. The career education movement represents a call for educational reform based on the needs of the post-industrial, service-information oriented occupational society in which we now live and, in addition, the larger society itself. This call centers around the changing nature of work in the total societal structure.

Those who seek to understand the broader, societal basis for career education would do well to begin their study with books such as:

1. Gooding, Judson. The Job Revolution. New York: Walker and Company, 1972.
2. Hoffer, Eric. The Ordeal of Change. New York: Harper Brothers, 1963.
3. Levitan, Sar. Work Is Here to Stay, Alas. Salt Lake City: Olympus Publishing Company, 1973.
4. Sennett, Richard and J. Cobb. The Hidden Injuries of Class. New York: Knopf Publishing Company, 1972.
5. Sheppard, Harold L. and N. Herrick. Where Have All the Robots Gone? Worker Dissatisfaction in the 70's. New York: The Free Press, 1972.
6. Work in America: Report of a Special Task Force to the Secretary of Health, Education and Welfare. Cambridge: MIT Press, 1973.

Documents such as cited above make it abundantly clear that worker alienation is a real and growing phenomenon in the United States. The problems seem to stem from the presence of both over-educated and under-educated members of the paid work force.

Contributions of the over-educated worker to problems of worker alienation stem from a variety of sources. Once such source is found in the large numbers of occupations and jobs whose entry requirements have been raised without basically changing the nature of the work itself. Where a college degree is now required to enter an occupation that formerly required only a high school education, it is not surprising that those possessing such degrees experience a lack of challenge in the job.

A second source of dissatisfaction for the over-educated worker is the continuing presence of the concept of "Taylorism" in structuring job duties and assignments. This concept which, in essence, contends that greater efficiency (and so greater productivity) can result when jobs are split up into very finite assignments with each worker being responsible for repeating a very small portion of the total production process time after time surely does seem to be a factor in worker alienation. The worker who knows he can do his job perfectly is deprived of the opportunity to challenge himself each day with the job tasks that are before him. It is hard for a worker to take pride in a product he never sees. It is equally hard to gain personal satisfaction from providing service to a "customer" one never gets to know in person. As the occupational society moves further away from an emphasis on production of goods and towards an emphasis on production of services, the concept of "Taylorism" becomes more and more inappropriate.

The presence of under-educated workers is equally serious as a contributor to worker alienation. The increasing complexity of the occupational society has clearly resulted in a lessening of demand for unskilled workers and an increase in demand for workers possessing specific skills and competencies. A willingness to perform, in the absence of skills required for effective performance, is of minimal value to an employer and maximally frustrating to the worker. As workers are faced with problems of acquiring increasingly complex sets of job competencies, they are simultaneously faced with problems of the rapidity of change in the occupational society. Thus, in a very real sense, it is possible for a worker's skills to become obsolete before he or she has fully mastered them. The need for recurrent and continuing education

is increasing rapidly throughout the occupational society. The need for workers possessing sufficient breadth and depth in basic education so as to be adaptable to the changing nature of the occupational society becomes greater each year. Problems of helping workers cope with the certainty of uncertainty that most face in ways that will allow them to exercise maximum personal control over their own occupational destinies are certainly a contributing factor to worker alienation.

Thus, education is seen to be a major cause of worker alienation in the case of both the over-educated and the under-educated members of the occupational society. If this is true, then solutions to problems of worker alienation will surely involve major changes in American education. The exact specification of such needed changes is intimately involved in the conceptualization of career education.

The presence of worker alienation is frequently verified by observing the lack of productivity, lack of quality in products or services, increases in both worker and employer dissatisfaction, and increases in absenteeism in the work place. Ample evidence exists to document the presence of conditions such as these in the occupational society of the United States.

The results of worker alienation extend far beyond their economic implications. Basically, worker alienation must be viewed causally as a psychological/sociological phenomenon. It seems increasingly true that work no longer holds personal meaning and meaningfulness in the minds of many American workers. Too many appear to be in a position where they endure their jobs rather than gain personal satisfaction from their work. They try to "get by" at work while conserving as much energy as possible for activities in which they hope to engage after leaving their place of paid employment. The basic human need for achievement -- for accomplishment -- for feeling that one has done something that is really worthwhile -- is, for increasing numbers of workers, one that must be met through activities performed outside their place of paid employment.

The suggested solutions that are currently popular seem to be especially pertinent to those who profess to be concerned about career education in the school setting.

Suggestions include:

1. Allowing workers greater autonomy in determining their work hours and specific work assignments
2. Providing workers with greater variety of specific job assignments
3. Demonstrating to workers the importance of their role in providing the final product or service to which they contribute
4. Providing "fringe benefits" to workers that improve the general quality of life available to the worker
5. Providing workers with career ladders along with the means and the incentive to advance up a career ladder
6. Providing workers with opportunity to use their own ingenuity and creativity in making suggestions for improving conditions of the work place and quality of the work to be performed
7. Providing workers with greater opportunity to interact with one another in ways that demonstrate the interdependence of workers as well as the worth and dignity of each worker
8. Providing workers with added incentives for producing quality work products and/or services on a "on -time" basis
9. Placing more trust, confidence, and responsibility in the individual worker rather than relying on constant, close supervision by "bosses"
10. Allowing workers some real voice in basic policy and management decisions that affect their work and their status as workers

Management has assumed that, if worker alienation can be reduced through solutions such as these, productivity will increase. This assumption seems to have been borne out in recent industrial experiences. Where work has become more meaningful and personally satisfying to the individual worker, work output and the quality of work have increased. Whether simply providing workers with more money might not also increase productivity appears to be a question that is not yet clearly settled. It does seem clear that increased financial rewards to workers, while perhaps a necessary condition for increased productivity, are not, in and of themselves, <u>sufficient</u> to guarantee a higher output of quality work.

The Case for Career Education in American Education

There are two essential bases for viewing the case for career education as it currently exists in American education. The first, and most obvious, is related to

the changing and ever-closer relationships between education and the occupational society. It is clear that American education has not produced enough graduates with the technical-vocational skills required in today's occupational society. It is equally clear that our college graduates have, in many instances, been deficient in the level and nature of specific job competencies they possess. Finally, it is abundantly clear that American education has fallen far short of meeting the recurrent and continuing educational needs of adults who are seeking to re-enter the occupational society, to change jobs within that society, or to advance up a career ladder in their area of chosen occupational endeavor. We have reached a point where we can no longer afford to ignore the relationships existing between education and the occupational society. These relationships have increased each year and are now a matter of deep societal concern.

It is this kind of need that has led to an emphasis, within the career education movement, on providing more and better occupational education programs at both the secondary and post-secondary school levels, to increasing the attention being paid to career implications of college degrees and jobs to which such degrees may lead, to an increased emphasis on career guidance and career decision making, and to increasing the call for our schools to better meet the educational needs of both youth and adults who have exited from the formal system of education. It has been the failure of the American educational system to respond to such changing societal needs that has created much of the external call for educational reform represented by the career education movement.

The second, and equally important, basis for viewing the case for career education in American education stems from the fact that worker alienation exists within the educational system as well as in the general occupational society. It is contended here that most workers experienced worker alienation problems long before they entered the labor force as paid employees. The presence of "worker alienation" can be seen in almost any elementary school classroom. There, it takes the form of pupils who see no good reason for coming to school, no relationships between what they

when they leave, and no relationships between one school subject or another. Further, they are told when to come to school, how they must act to win approval while in school, what they must study at a particular time, and how they failed to perform up to the teacher's (supervisor's) satisfaction. Finally, they are given little or no opportunity to participate in policy decisions affecting them nor any systematic incentives (except grades) to increase their productivity. That is, we find, when we look at the work place and the work of the pupil, an almost exactly analogous set of conditions leading to worker alienation as we find in the larger occupational society.

A similar situation exists at the secondary school level. There, students in the college preparatory curriculum have an impression they are getting ready to go to college -- even though they don't know, in many instances, why they should do so. Students in the general curriculum are apparently there to get a diploma with most probably feeling that, if they don't have one, something "bad" will happen to them. Students in the vocational curriculum, while apparently enrolled to acquire vocational skills required for employment, aren't sure they are receiving the proper skills and are certainly, in many secondary schools, made to feel like "second class" citizens.

At the college and university level, worker alienation symptoms are seen in the behaviors and attitudes of thousands of students who don't really know why they ever went to college. Someone told them, "Go to college and you will find yourself" -- and they went to college and looked. As with both elementary and secondary school students, many college students seem to be operating under the false assumption that the purpose of education is simply preparation for more education. The persistently high dropout rates from both colleges and secondary schools attest to the presence of alienation towards their work as students on the part of many persons.

If worker alienation symptoms were seen in our educational system only among students, the situation would not be as bad as we know it to be. The truth is, worker alienation is a very real problem today among teachers, counselors, and school administrators as well as among the students they seek to serve. The "Taylorism" of the assembly line in industry is reflected in educational organizations across the land

where, in school after school, each teacher is given responsibility for only a very small part of the educational enterprise as it impacts on the life of any given student. The tenth grade English teacher knows she must do something different from that which either the ninth or the eleventh grade English teacher does to provide her students with competencies in English. At the same time, she is given an impression that she mustn't "interfere" with what other tenth grade teachers are doing with the same students in other subject matter areas.

Concepts of both the "over-educated" and the "under-educated" worker certainly can be applied to those persons employed in occupations within the field of education. Well qualified teachers, in school after school, are asked to follow a strict curriculum guide, cover a given amount of content, maintain classroom order to a particular degree, and be responsible for a very small, finite aspect of the total educational process. They are given little voice in policy making and little freedom to be as innovative and creative in the classroom as their intellect and educational background would enable them to be. With crowded classrooms, limited instructional materials, and even greater limits on real autonomy, they are told to "motivate" students (which is definitionally impossible) and to "provide for individual differences" (which, given the conditions under which they must work, they cannot possible accomplish).

Thus, the "over-educated" teacher can be seen in schools throughout the nation -- teachers who are much more intelligent and knowledgeable than their jobs allow them to be. The presence of "under-educated" teachers, in the form of those who are asked to teach subjects outside their major field, is also a common matter Similarly, when the student as a "worker" is considered, we find both "over-educated" (i.e., students who already know what they are being asked to study) and "under-educated" (i.e., students who cannot master what they are being asked to learn) pupils in classroom after classroom. The presence of over-educated workers leads to boredom on the job while the condition of being under-educated leads to frustration. Whether, then, its roots are found in boredom or frustration, the result -- the alienated

worker -- is the same.

Teachers who are alienated from their work are almost sure to alienate students from the students' work. The result is a loss in educational productivity (measured in terms of increases in student academic achievement) and unhappiness and dissatisfaction with the "educational factory" and the "educational assembly line" on the part of both teachers and students.

The presence of "worker alienation" on the part of both students and teachers in American education lies behind those efforts of the career education movement to engage in such activities as: a) encouraging a project approach to teaching; b) encouraging team-teaching and other forms of cooperation among teachers; c) encouraging efforts to show students -- and teachers -- the paid employment implications of the substantive content of education; d) encouraging greater student and teacher participation in educational decision making; e) encouraging flexible scheduling of various kinds that provide both students and teachers with greater autonomy with respect to planning their work; and f) encouraging performance evaluation, rather than time (as measured by Carnegie units) as a prime means of measuring educational accomplishment. Each of these kinds of examples can be seen to have almost exact counterparts in recent attempts on the part of industry to reduce worker alienation.

The logical questions that come at this point are: a) If reduction of worker alienation results in increased productivity in industry, shouldn't reduction in educational worker alienation (among both teachers and students) result in greater productivity (i.e., increased educational achievement) in education? and b) If students are learning in their present educational settings to be "work-alienated", what would happen to worker alienation in the industrial setting if students were "satisfied workers" while in school getting ready to move into the occupational society? The "logical" answers to these "logical" questions lie very near the base of the rationale for much of the career education movement.

In summary, the case for career education, within American education itself, stems from a combination of: a) The need to change educational practices in ways

that recognize the changing role of education in our changing society -- with particular reference to the presence of "over-educated" and "under-educated" members of the labor force; and b) The need to reduce worker alienation, as it exists among both professional educators and students, within the structure of American education.

Definitional Problems

We cannot hope to successfully solve today's problems while saddled with outmoded definitions of key terms with which we are concerned. Too many people today still seem to believe that:

-- "Work" means "paid employment"

-- "Career" means "a succession of jobs and/or occupations"

-- "Education" means "schooling"

-- "Leisure" means "play"

It is contended here that each of the above definitions is fallacious in these times. To adequately conceptualize the career education movement demands that new meanings be attached to each of these terms.

Of these four words, the most crucial, in a definitional sense, is the word "work". The following definition has been formulated for use here:

-- "Work"is conscious effort aimed at producing benefits for oneself and/or for others.

Of the words contained in this definition, several are of special importance. First, the definition is restricted to "conscious effort" -- thus recognizing the importance of one both wanting to do something and trying to do it. In this sense, what is "work" by definition demands the presence of purposefulness and motivation on the part of the worker. Second, this definition is restricted by the concept of productivity -- of accomplishment -- of doing. As such, it must result in a feeling, on the part of the individual, of having done "something" as opposed to "nothing". Third, the definition of "work" used here is restricted by the word "benefits". Whether it be goods, services, or some combination of the two, people who work aim to see that some-

one is better off because of the work than they would have been had no work been performed. Fourth, "work" is seen always as producing benefits for the individual who performs it -- whether those benefits be in the form of economic returns, personal satisfaction, a visible product, or anything else. To recognize that mortal man does nothing that produces no benefits for himself is simply to recognize the basic principle on which the psychology of motivation is based. Finally, this definition recognizes that "work" often (and, perhaps, most often) produces benefits for others as well as for the worker.

If one wonders whether or not a particular activity can be considered "work", the following questions can be asked: a) Did the individual want to do it? (If he didn't, the activity might be "labor" but it could not be work); b) Did the individual try to accomplish something? c) Was what the individual tried to accomplish seen by him as designed to benefit someone? If a "yes" answer can be given to all three of these questions, it is contended here that the activity can be regarded as "work".

"Work," as defined here, is seen as self-fulfilling for the individual and contributing to his feelings of self worth, dignity and importance. In this sense, the term "work alienation" can be viewed as a nonsensical term. That is, people are not alienated from work, as defined here, although they may very well be alienated from labor.

This definition of "work" carries no restrictions of paid employment. Thus, it can be seen as including the work of the full-time homemaker, the student, and the growing numbers of volunteers in our country. Neither does it carry any restriction of necessary enjoyment or dislike for the activity on the part of the worker. Finally, it carries no restrictions limiting it only to activity that is "hard" to do. In career education, then, we do not try to talk to students about "becoming" workers when they grow up. Rather, we emphasize to them they are workers <u>right now</u>. (Or, at least, we <u>hope</u> they are!)

With this definition of "work", we can then define "career as follows"

-- "Career" is defined as the totality of work one does in his/her lifetime.

Thus, each of us has only one career which consists of all the work -- paid and unpaid -- that we perform during our lifetime. One's "career" may include a wide variety of occupations and an even wider variety of jobs but, simply because one changes his or her occupation, in no way means he has entered a "new career". The "career" of most persons, with this definition, must be seen as beginning sometime prior to entering the formal educational system and continuing through the retirement years. With this definition, use of the word "career" in the term "career education" takes on a considerably broader meaning than that associated with the world of paid employment or the concept of economic man.

In the term "career education", education is intended to extend, in its meaning, considerably beyond the formal system of American education represented by our elementary, secondary, and post-secondary educational institutions. The definition used here is:

-- "Education" is defined as the totality of formal, informal, and incidental processes through which an individual learns.

As defined here, "education" includes our public school system, employer training, self-study, and all forms of "learning by doing". As such, it is seen, like the word "career", as something that begins very early in life and continues well into the retirement years. In this sense, "career education", in a generic (not a strict definitional) sense, concerns itself with all that an individual learns that contributes to the work he does during his or her lifetime. (This, of course, does not mean that the only reason an individual learns something is so that work can be performed.)

With the set of definitions presented so far, it is essential that the term "leisure" also be defined.

-- "Leisure" is defined as activities in which an individual engages when not engaged in paid employment.

This definition is important in order to emphasize the face that the concept of work extends beyond the notion of paid employment. Many individuals are spending an increasing amount of their leisure time performing work -- and thus gaining increased feelings of self worth, dignity, and accomplishment for themselves. There is absolutely no reason why the word "leisure" should be considered synonymous with the word "play" even though most individuals can be expected to use some of their leisure time in "play".

Definition of "Career Education"

Based on the conceptual attempt presented here, the following definition of "career education" appears appropriate.[1]

-- "Career education" is the total effort of public education and the community to help all individuals to become familiar with the values of a work-oriented society, to integrate these values into their personal value systems, and to implement these values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual.

In attempting to clarify the meaning and implications of this definition, the following points are important:

1. Career education is an effort, not merely an "attitude" as some have said. As such, it is going to require some time, materials, and money.
2. "Public education" means education available to the public and from which the public can choose. Thus, it is a term considerably broader than the formal public education system of the United States and much, much broader than the K-12 public school system.
3. Career education represents a joint effort of public education and the community. It is not something that the formal education system can do by itself. The notion of the formal education system working as a collaborator

[1]This definition, coined by K. Hoyt, first appeared in: Hoyt, K. et al. Career Education: What It Is and How to Do It. It subsequently appeared in Career Education: A Handbook for Implementation produced for the U. S. Office of Education pursuant to a grant to the Maryland State Department of Education under a subcontract with Olympus Research Corporation.

with the community, rather than asking the community to simply "cooperate" in a program that is basically controlled and operated by the formal educational system is one of the distinguishing features of career education.

4. Career education seeks to help all individuals -- from the pre-school years through retirement life. It is not simply something for school age youth.
5. Career education's objectives and goals represent only a portion of those associated with American education and the total society of which education is a part. Career education seeks to be recognized as a significant and needed effort in ways that neither demean nor detract from any other worthy educational or societal goal. It does not say that "work" is the most important thing in the lives of individuals, but only that "work" should be one of the important and meaningful parts of the individual's life.
6. Career education's first objective is to help individuals to become familiar with the values of a work-oriented society -- with all of the various reasons why persons, in our society, will be motivated to work. It does so without seeking, in any way, to picture one set of work values as necessarily "better" than any other. The emphasis on work values, rather than any form of a work ethic, is purposeful in this definition and reflects a basic concern for the welfare of the individual rather than "work" being viewed as some kind of societal obligation.
7. Career education's second objective is to help individuals integrate some set of work values into their personal value structure. Clearly, the career education movement, as conceptualized here, does seek to help all individuals want to work. Note that this is an "objective", not a "requirement", of career education. That is, while we truly do want all individuals to want to work, career education in no way seeks to impose work values on individuals.
8. Career education's third objective is to help individuals implement work values in their lives. This implies a commitment to providing individuals with good work habits, with work skills, and with opportunities -- paid or unpaid -- to actually engage in work.

9. The goals of career education are to make work possible, meaningful, and satisfying to each individual. By "possible", we mean that the individual should be able to find work if he or she seeks it. By "meaningful," we mean that the individual should understand the importance of his or her work and the ways in which that work is producing benefits to someone. By "satisfying", we mean that an individual's work should lead the individual to see the work in which he or she engages as giving more purpose, more personal meaning, and more joy to his or her life by allowing the individual to view himself or herself as a person of worth in our society.

As conceptualized here, "career education" has its centrality of concern in the word "work" and the personal significance that word holds in the lives of all individuals. The concept of "work", as presented here, will hopefully be one that will serve to bring about the kind of educational reform called for by the occupational society in which we now live. More important, it will hopefully be a means of bringing greater personal meaning to the lives of all individuals. As viewed here, "career education" is very much a part of the human services movement that allows for a coordinated effort extending over all age levels, geographic settings, and societal institutions.

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CHAPTER II: THE GIFTED AND TALENTED: CURRENT STATUS AND APPROACHES

The terms gifted and talented usually invokes an immediate reaction of aversion to any support of intellectual snobbery. Yet everyone seems to understand the logic of a million dollar bonus for the potential star pitcher and the need he has for special training. Indeed, it is recognized that his efforts might mean the pennant!

The discussion over whether those with special gifts in the intellectual realm or talents in realms such as the arts have a greater obligation to society or to their own development continues to rage. It would appear that such a discussion is futile. For the needs of the individual and the needs of society are not mutually exclusive.

Historical evidence abounds which indicates that societal changes reflect the contribution of those with greater gifts and talents. Likewise, there is also evidence that such individuals opted to contribute to society and were not faced with loss of individuality nor lack of individual option. Thus, endless argument over the greater need is a fruitless diversion. Such discussion has often diverted energies from the task of appropriate provisions for the gifted and talented no matter what semantic problems surround the definition of giftedness or talent.

Suffice it to recognize that the need to develop within each individual the best that can be developed is the birthright of those who are more capable and/or more talented as well as those less capable. The fact that this group will be able to contribute effectively to society can not be ignored and is a concurrent reason for the development of appropriate opportunities for the gifted and talented. Pertinent to these points is Torrance's observation: "A common fallacy is that if a young person possesses any real spark of creativity, this potential will somehow flourish and manifest itself in spite of neglect, punishment, and coercive pressures" (Torrance, 1972).[1] This point can be extended acrose the whole range of gifted and

talented performances.

Change is an ever-present factor in today's education. Since the gifted and talented are considered to be more endowed, often they have been more affected by change. This is not in a forward motion via the development of program but by default. The complexity of our technological life coupled with threats to our survival requires that greater attention be paid to our intellectual resources.

Any attempt to analyze the present and past status and approaches relating to the gifted and talented student population focuses immediately upon the question: Who are the gifted and talented? Broadly speaking, this population includes those who demonstrate intellectual agility, or conceptual power or creative endeavor. While specific definitions are found in the chapter on identification and characteristics it is imperative to recognize that giftedness and/or talent implies the potential for excellence.

Such a posture is not an elitest one for giftedness and talent are present in every strata of society and in every geographical area.

Sputnik is generally recognized as the electrifying impetus that "something be done for the gifted". Panic as to this country's scientific status immediately produced the "new" science and the "new" mathematics. Those who could handle the more rigorous content were identified and special programs emerged.

Prior to 1960 programs occurred primarily in urban areas and were usually separate entities - a special class or a special school. Provisions for the gifted were mainly administrative in nature. Rapid population increase and the desire to respond to the world with scientific advances promoted the move toward acceleration. Telescoping a grade, early admission to college, and grade skipping are examples of prominent provisions at that time. Such provisions reflect the philosophical base present at that time that the gifted should be provided through separate means and preceeds emphasis on creativity, individualization or flexible options.

Heavy emphasis in academic content was notable in the majority of these programs. Selection criteria clearly reflected the program parameters in that identification was based on characteristics which were academically oriented and less oriented to diversity.

Recognition of these emphases does not indicate criticism but rather acknowledges the efforts of the schools to react appropriately to need. Likewise, the increased numbers being educated underlined the necessity to respond in differing ways to mass education. Public schools were feeling the pressure to provide for all and to maintain quality programs. Compulsory education was fully implemented.

In the next decade, 1960-70, changes occurred. Some of these changes were semantic in nature rather than substantative. For some acceleration became non-graded and the gifted became academically talented. However, significant program changes did occur.

The whole educational setting reflected differing responses to a differing society. While population was still growing, the rate had lessened. Financial purse-strings were tightened as anti-war and anti-establishment sentiment grew. New general educational terms came to the fore ; open space, teaming and resource centers, learning centers, relevant, small-groups and large group instruction, etc. Throughout the educational world the reassertion of individual rights gave rise to increasing concern for individualization within the classroom. This had the effect of refocusing attention on the education of the superior students. Increased effort to aid the disadvantaged caused recognition of the need to identify gifted and talented students among the disadvantaged. These different forces engendered curricular modifications rather than administrative modifications.

Parallel to these developments was the reassessment of the philosophical belief that separation was the appropriate way to provide for the gifted and talented individuals within the school setting. Therefore, the number of these

"separate" provisions diminished during the 1960's. Lack of organized provisions at the state and local school system levels became apparent. A study of state certification requirements during this period reveals a decrease in the number of states providing a specific credential in the education of the gifted and talented. Fewer designated leadership positions in the gifted area at state and local levels existed during the late 60's.

As the society changed, the philosophy for educational programming for the gifted and talented also changed. The movement away from the concrete focus on the scientific technological aspects coupled with new attention to the total area of creativity formed the basis for new developments. Research in creativity developed out of discontent with available instruments for measuring intelligence and ranged from the expressive areas of the arts to the cognitive areas of divergent thinking and inquiry.

With this research as an impetus set in a societal background championing individual rights, programs for the gifted and talented began to be more a part of rather than apart from. Social concerns such as drug abuse, pollution, crime, and youthful rebellion caused a conceptual attempt to restructure learning in an effort to be "relevant". Many gifted and talented students appeared to be disenchanted with the role of formal education.

Thus as the 1970's began, individualization and flexibility through many honest options for individuals became the goal of programs for the gifted students. State departments altered requirements; selected students are encouraged to take courses at a nearby college for part of the day; waivers for the twelfth year are more common; and even volunteers are encouraged to participate in the school program.

What has occurred in educational planning for the gifted and talented due to these factors?

Curricular modifications continue which emphasize process and structure of the

disciplines. Social sciences are focusing on inquiry into conceptual strategies. New curricular content which cuts across disciplines includes environmental education, drug education, and career education. While this is true for all students, special attention has been given to those considered to be future innovators and problem-solvers - the gifted and talented.

Additionally, renewed effort is evident in the development of talent. In an era of "do you own thing" the composer, musician, or artist has greater acceptance and support. Engaging in the development of talent is now more respectable.

While women's liberation movements have resulted in less sex typing, the gifted woman student usually had more options open than other females. The press for and some acceptance of a broadening role for women has influenced curriculum choices and offerings for gifted and talented females.

One of the dominant characteristics of the 70's is involvement. This involvement is two-fold - involvement of the individual in his own educational choices and involvement of the community in educational decisions. Such involvement is evident through increased legislative activity at national and state levels for provision of an increasingly wider range of options for the gifted and talented individual. This is a part of the manifestation of the total concept of accessibility.

Local citizenry also anticipate increased involvement via advisory committees and more active community based programs. The current decade with its greater focus on individualization accepts greater mobility in career choices. This mandates the provision of programs for individuals at various stages in their lives thus necessitating the extension of formal and non-formal educational experiences beyond the traditional concept of school and age limits.

Flexibility in requirements, entry and exit provisions and educational purpose is increasingly apparent. The multipotentiality and wide range of interests of the gifted and talented provokes a greater need for these provisions.

As the decade of the 70's continues to focus on espousing the philosophy of individualization and improved human relations the major concern of thinking educators is that such philosophy will engender short-lived gains if a high priority is not given to develop a cadre of leadership. Advocates for and developers of programs for the gifted and talented must come from such leadership.

Efforts on behalf of the gifted and talented must be articulated with the total educational effort; Otherwise any efforts become short-lived, sporadic, and lacking in continuity.

The broadening of the concept of giftedness and talent to not only include the area of academic performance and creative talent but also include specific attention to areas such as psychomotor ability and leadership is more appropriate in light of present knowledge.

Principles of the career education concept appear to provide a viable vehicle to accomplish individualization, flexibility of career choice, integral linkage to societal priorities, and the development of leadership potential based upon the broadened definition of giftedness and talent.

1. Torrance, E. Paul. Potentially creative youth. In Recognizing and Assisting Multipotential Youth. Ronald H. Fredrickson and John W.M. Rothney (Eds.) Columbus, Ohio: Charles E. Merrill Publishing Company, 1972.

Section B: Basic Background Papers

Chapter III -- The Future of Work

Chapter IV -- Identification and Characteristics of Gifted and Talented Students

Chapter V -- Career Development Problems of Gifted and Talented Students

THE FUTURE OF WORK

"Work is the crabgrass in the lawn of life." This bit of wisdom from the eminent social philosopher, Snoopy, recorded by his amenuensis, Charles Schulz, may be a fitting introduction in an article which attempts to answer the question, "Why?" relative to career education for the gifted and talented. There is a great deal of confusion about the meaning of career education and everybody who talks about it doesn't mean the same thing by it. Nevertheless, it obviously has something to do with work and people's working lives. The gifted and talented are, by most definitions, those who tend to do best in the labor market. At least those who become known for their gifts and talents generally experience the least unemployment. They are likely to achieve the highest incomes. The most interesting and challenging jobs society has to offer are available to them. There may be and likely are those whose gifts and talents are never recognized by the labor market, but the assumption is that they are few in proportion. Why should one be concerned about the nature of the future work of such a fortunate group, and why do they need career education?

The popular and academic literature is suddenly filled with concern for the nature of work and the quality of working lives. The subject is not new; the emphasis is a return, not an invention. But the focus of concern is, and it always has been, the industrial workers and the boredom of repetitive tasks. Called often the "Blue Collar Blues", it encompasses repetitive white collar and service tasks as well. The commonly recommended cure is job enrichment to add some element of autonomy and interest to what are inherently unchallenging tasks. The difference from

the past is not so much the nature of these jobs nor their number; it is the nature of the people. They have higher expectations now. But this is not a problem for the gifted and talented. Almost by nature, they will get the best of what it is about.

It is easy to overestimate the number of young people who have elected to "opt out" of the established society, including its labor markets. No one knows whether the so-called "counterculture" is a random and temporary phenomenon or a warning of things to come. It is only known that some are in that category now. Whether age will bring more normal assumption of responsibilities and accepted life styles is also unknown. There is a suspicion that those disposed to reject society's values and norms are drawn from among its brightest. Evidence on this point is also sparce. It does seem likely that the talented and gifted are among the more influential. Their capabilities probably include the articulateness which should make the individual more persuasive than the average of his peers.

It is rare to attend a career education conference without several participants complaining, "Why emphasize careers when work is disappearing and leisure is what we need to prepare people for?" Perhaps this is the primary concern from which this chapter arises.

Since career education obviously has to do with work, whether career education is desirable for those expected to be the most persuasive among the coming generation depends upon the role work is expected to play in future lives. For that reason this chapter is directed at the following issues:

1. Is work disappearing?
2. What is happening to the nature of work?
3. What does work mean in life, now and in the future?
4. Are the answers to these questions any different for the gifted and talented than for anyone else?

Is Work Disappearing?

To the economist who thought the automation spectre had been thoroughly expelled in 1966,[1] the frequent reiteration of this fallacy comes as a shock. But past exorcisms can be repeated along with some elementary economics. If for the moment we restrict the definition of work to paid employment, the amount of work to be done at any point in time depends upon the number of people to be housed, clothed, and fed, their purchasing power and their expenditure choices. There is a rough correspondence between the size of the population and the number of people available for work, depending upon the age structure of the population and labor force participation rates. The amount of goods and services which can be produced depends upon the number of people who are able and willing to work and their productivity. The latter is determined not only by their own skills and willingness to exert effort, but the nature of the job, the quality of the management, and the amount and kind of equipment.

All of this is a prelude to a trite but apparently oft-overlooked fact. For the amount of work to be done to decline requires one or more of the following to be true:

1. People lack the purchasing power to buy the goods and services they need and desire.
2. People have all of the goods and services they want, preferring either to save income or to not earn income to purchase more.
3. Workers and potential workers prefer more leisure to more income and choose not to produce goods and services which are in demand.

The usual formulation of the "work is disappearing" argument is that technology is becoming so pervasive and so efficient that machines will do most of the work people now do. Stated more formally, productivity is rising more rapidly than people choose to increase their material standards of living.

[1] Technology and the American Economy, Report of the National Commission on Automation, Technology and Economic Progress, Washington, Gov't. Printing Office, 1966.

Productivity is customarily measured in output per manhour--the value of goods and services produced from an hour of labor. The highest in the world historically, that figure for the U.S. increased an average of 2 percent per year before the second world war and has been increasing nearly 3 percent per year since. For every increase in productivity, the populous can have a choice between some combination of more goods and services and more leisure. The possibilities are intriguing. A doubling of real income every 23 years is possible if the entire gain were taken in income. On the other hand, if the society chose a static material standard of living and poured all of its productivity gains into more leisure, the following are realistic alternatives within 20 years; A 22 hour workweek or a twenty seven week workyear, or retirement at age 37.[2] Over the last century, the choice in the United States has been to allocate about two-thirds of the increased productivity to greater consumption of goods and services and about one-third to more leisure. However, we have tended to become less leisure conscious and more income-oriented since the 40 hour week became nearly universal. During the 1960's only 8 percent of the rise in productivity was allocated to increased leisure, people choosing income for the rest. In fact there is some evidence that the hours of work of professionals, managers and administrators may be lengthening while those others decline slowly. We are the most affluent society the world has ever known but there is no evidence of satiety in our preferences for creature comforts. And given that predilection, leisure itself becomes expensive and requires more income to enjoy it. With $10,000 as the average family income, one family out of eight still in poverty and about the same proportion with incomes above $15,000 a year (rarely described as affluence), the day when there will be no desire for added goods and services seems remote indeed.

[2] Juanita M. Kreps and Joseph J. Spengler, "The Leisure Component of Economic Growth", in Howard R. Bowen and Garth L. Mangum (eds.) Automation and Economic Propers, Englewood Cliffs, N. J., Prentice-Hall, Inc., 1966, p. 131.

Since modern governments have the economic tools to create purchasing power at will, to assume a decline in the total amount of work to be done requires one to assume that either policy makers will not use these tools and will allow unemployment to rise, or the pace of productivity increase will accelerate drastically, or people in general will opt for slower rises in their material standards of living than they have enjoyed in the past. However, all the evidence is that unemployment remains a potent threat to incumbent politicians. Of course, inflation is as well and a balance must be struck, but national administrations clearly become defensive if unemployment rises much above 5 percent of the labor force. At whatever point unemployment threatens their political survival, they will bring it down and they have the economic tools for doing so.

For productivity to outstrip consumption, given adequate purchasing power requires the assumption of dramatic breakthroughs in the pace of productivity growth. But the present concern among economists is that productivity increases might slow, not accelerate. Most of past productivity growth was accomplished by transition of labor from low productivity agriculture to higher productivity manufacturing, though a rapid rise in agricultural productivity over the past 33 years has added significantly to that rate of improvement. Now the movement is to lower productivity services and government employment where there is limited opportunity to supplement labor with machinery. Service productivity will undoubtedly improve but its pace is unlikely to ever reach the levels of improvement available in more inherently mechanical activities. For the first time, American productivity even appears challenged by rates of productivity increase in other countries, with imbalancing effect on international trade and exchange rates. No country yet exceeds us in average productivity but several have gained upon us through more rapid productivity growth. As a result, even though there is not less work to be done, more of it tends to be done for us by

workers of other countries. At present rate, total real production per manhour in the United States could double in about 25 years, or present output could be produced by then with one-half the manpower. With the ecological emphasis, we are no longer as sure as we once were that bigger and bigger and more and more is necessarily better. Nevertheless, evidence is lacking that we are prepared to accept a stagnant income standard as the price of ecological protection. There is also the likelihood that aggressive efforts to protect and improve the environment would create new and additional jobs. All of the indications are that, even though economic growth will not remain the unchallenged goal it has been, the overwhelming majority of our fellow men will still be seeking improved living standards through work further into the future than anyone can foresee.

Additional evidence from the supply side is the trend in labor force participation rates. Though the rates for younger and older men decline as the former stay in school longer and the latter retire earlier, the middle group of males remain stable and female rates rise rapidly enough to keep the overall level constant. Thus, men work less and women more in a lifetime, both largely as a matter of opportunity and choice, but with work still the major activity of adult non-aged years. Unemployment, too, shows no secular tendency to rise, fluctuating with the state of the economy and the labor force proportion comprised of the highly elastic female and teenage components. The amount of leisure time has increased over a long time perspective. For instance, the average worker now has 1200 hours more of non-work time each year than he had at the turn of the century, though reductions in work-time have been very modest in more recent times. The most dramatic change has been the extra 9 years of non-work time the male has gained because he starts work later, retires earlier and lives longer. Women, on the other hand, have increased their time in paid employment.

For better or worse, there is no secular evidence that work is disappearing or even significantly declining for the American people. In fact, the activity commitment in the USA is such that 22 million -- one of every 6 adults -- contribute the total of 900,000 man years each year to voluntary, unpaid service activities. Half do so in addition to regular employment and the other half in addition to their household and family responsibilities.

What Will Workers in the Future Do?

If people are going to be working as far in the future as can be foreseen, what will they be doing; how enjoyable and challenging will it be? Rapid change, uncertainty and displacement in the labor market has been amply advertised and perhaps overstressed. As a consequence, the deliberateness of the overall evolution in the occupational structure is sometimes overlooked. The U. S. labor force has been and will continue to grow rapidly for a few more years, consequent to the high birth rate of the late 1940s and 1950s and to the persistently rising labor force participation of women. Employment has expanded nearly as rapidly, though the larger proportion of women and teenagers in the population with their tendency to move fluidly in and out of the labor force in response to job opportunities, makes it difficult to restrain unemployment levels to the low levels of the late 1960s. Yet, while total employment increased by 20 percent between 1960 and 1970 and will grow another 15 percent between 1970 and 1980, the occupational groups within which each worker is likely to be employed change slowly and only modestly.

For instance, the chances were 11.4 out of 100 that any particular member of the labor force would have been employed in professional and technical occupations in 1960 and 14.2 out of 100 in 1970. In 1980, the projected probability is expected to be 16.3 out of 100. The shift toward clerical employment has been and will be slightly more modest, 14.8, 17.4, and 18.2 out of 100, respectively. For no other

occupational groups have there been or will there be significant sectoral shifts except in the declining labor and farm categories. The chances of being employed as a non-farm laborer were 5.4 out of 100 in 1960, 4.7 out of 100 in 1970, and will be 3.7 out of 100 in 1980. For farmers and farm laborers, the probabilities were and will be 7.9, 4.0, and 2.7, respectively.

The message should be clear. Most people in 1980 will be engaged in the same broad occupational activities they would have been in 1960. Professional and technical and clerical were the only areas of significantly increasing probabilities, and labor and farm the only significantly declining ones. The pattern by industry division is similar with agricultural employment declining substantially as a proportion of the labor force, goods-producing industry experiencing a slow proportionate decline (from 37.3 to 31.3 per 100 over 20 years), and service-producing industries a moderate proportionate increase (62.4 to 68.7 per 100, 1960-80.)

Admittedly, stating the trends in this fashion dampens the recognition of change occurring within occupational groups and the displacement it causes and the adaptation it requires. It does not hide the drama of the continuing shift out of agriculture. It may mask the magnitude of the training and education assignment involved in a net increase of 8 million professional and technical workers, 8 million clerical and 4 million craftsmen, added to replacement requirements in 20 years. Service occupations vary so widely to make it impossible to talk sensibly about the training task involved in the 5 million net increase in service workers.

What this section does say is that:

1. Work opportunities will continue to be both available and necessary throughout the foreseeable years ahead for the society and for most adult members of the population. More, not less, people will work at some time during their lives; a lesser proportion of their total lifetime will be spent in work, but since their lives will be

longer, the total amount of work each does may not decline.

2. The broad occupational areas and industries in which people work will not change drastically in the years ahead. There will be a general expansion of those types of jobs where people enjoy autonomy and self-actualization and a persistent decline of repetitive jobs easily done by machines. Still, there will be plenty of grubby, dirty, and dull jobs, making job enrichment efforts useful and important. However, in general, the occupations and industries where this is the case are not generally the expanding ones.

Since the gifted and talented, as traditionally defined in our culture, have been those most likely to attend college, the occupational outlook for this portion of the gifted and talented can best be assessed by examining the supply and demand outlook for college-educated manpower. Such projections are rarely made more than ten years ahead, but, as already demonstrated, change, at least for broad occupational categories, is rarely drastic. The more specific occupations available over the next decade will be representative of the broader categories prevailing to the end of the century.

The most notable fact for the years ahead is the expected relative harmony between supply and demand. For the first quarter century following the second world war, relative shortages were the prevailing mode at the upper levels of the manpower strata. Starting from behind and pursuing a moving target, post-secondary education expanded rapidly. Overshooting was almost inevitable without the most careful planning. But, by coincidence, supply caught up just as demand was falling off. A concurrence of a business recession, cutback in federal research and development expenditures and the impact of falling birth rates on the demand for teachers suddenly ballooned the unemployment rate for college graduates. The first of these concurrent forces was temporary and is already recovering and offsetting to some degree the effects of the second. The third appears to be a much longer-term trend than the high

birth rates which preceded it. The outlook is not for continued surpluses of college-educated manpower but for a disappearance of the previous near-guarantee of professional employment provided by a diploma. Three developments can be anticipated.

1. The content of education and training, not simply the holding of a school credential, will become a hiring criterion.

2. A bumping back process will occur in which higher degrees will be expected for jobs formerly attainable with lesser ones.

3. The latter may be offset to some degree by the realization by employers that they pay triple for overprepared employees, once in repaying the employee for his educational investment, once in meeting his inflated expectations, and once through high turnover if his expectations are not met.

The whole college-educated labor market cannot be explored here but a few illustrations may serve.

Most of the jobs toward which gifted and talented people will be attracted will be in the general category denominated as professional and clerical. Even though, as emphasized, this category will increase only moderately as a proportion of all employment, the number of such jobs will increase by 40 percent over the 1970s as compared to 50 percent during the 1960s. Since total employment is expected to increase only by 20 percent, college graduates should meet favorable opportunities. The widespread pessimism one confronts on college campuses has its base on the supply rather than the demand side. That is, for a generation, the supply of the college-educated was so far behind the demand that employment seemed guaranteed to all holders of a "sheepskin". Now with the expansion of college output, supply and demand are in general balance with supply exceeding demand in a few fields.

The 1972 Manpower Report of the President estimated that of the 14 million

persons who will complete college during the 1970's, 9.8 million will enter the labor force to seek work. At the same time, jobs now held by college graduates will grow by 3.3 million, an added 3.7 million will be necessary to replace retirements, deaths, etc., and college educated people will move into 2.6 million jobs now held by people without degrees. This estimate of 9.8 million people for 9.6 million jobs is about as close to an equality of supply and demand as the margins of error in forecasting will allow.

Business majors, in general, will find favorable demand, especially in accounting and marketing. Sharp cutbacks in aerospace and other research and development expenditures contracted the demand for engineers temporarily. Engineering enrollment contracted in response, even though the long run outlook is for expanding opportunities in almost all engineering fields. Similarly, almost all health occupations offer demand greater than supply for yet a while, though slowing population growth and rising output will bring equality there as well. Prospects are favorable in the physical, natural and social sciences only for those with graduate degrees.

The surplus of elementary and secondary teachers is obvious, except for areas of special and remedial education and for those willing to work in central city ghettos and isolated rural areas. College teaching offers moderate opportunities, while all types of counselors are in short supply. Technicians will find moderate demand. Lawyers will be saved from difficulty only by the fact that few graduates choose to actively practice law. Librarians, computer programmers and social workers should find ample opportunities. Public administrators will do well in state and local governments but not in the federal. Thus, outside of teaching, the college educated will find favorable opportunities, but not the guaranteed success ticket of the past quarter century.

Less can be said about the outlook for artists, actors, musicians, and dancers. For these occupations more than any others, the supply tends to determine the demand. Demand depends upon the number of people who are willing to pay to watch and listen, but that is substantially influenced by the attractiveness of the performance, as well as by affluence, leisure and culture. There will always be far more who would prefer to be supported by their talents than the public is willing to support. Thus those gifts and talents must be in part their own reward. The best expectation is for rich rewards for a small proportion and struggles, frustrations or part time and avocational activity for the rest.

The Employment Act of 1946 declared it the official policy and responsibility

of the United States government to use the economic tools at its command to see that an adequate supply of work opportunities was always provided. That promise has not always been completely fulfilled, but we have come closer to it than we would have done had there been no such declaration. In effect, the manpower programs and equal employment opportunity legislation of the 1960s were a commitment to do something about distributing fairly that supply of employment opportunity. The career education movement is the first general recognition by the education establishment that it has a responsibility to that same interrelated set of goals. There is no political or economic evidence of a withdrawal from the employment commitment. There are fluctuations and changing emphasis within the political commitment. There is now a bit greater willingness to accept unemployment as a consequence of price stability and a somewhat reduced concern for equal employment opportunity. On the other hand, there is a stronger demand that welfare recipients work. But these are fluctuations around a central tendency which is a persistent social commitment to employment as the only really acceptable source of income and subsistence. Manpower projections pose no conflict with this long term commitment.

What of The Meaning of Work?

Next to the disappearance of work, the most frequent query in career education discussion is "But will work continue its central role in the lives of the oncoming generation?" Are we elevating preparation for work to primacy among education's goals just when work is assuming a declining role in the present and future lives of youth?

If all is to be more the same than different in labor markets, why such widespread feeling that the nature and meaning of work are undergoing radical change? The changing nature of work is observable only over a long period of time and may refer to change which has already occurred. Change in work's meaning may have

more to do with relative incomes than job content.

If man was cursed to "eat his bread by the sweat of his face", he has largely "beat the rap" in the United States. An economy one-half white collar, one-third blue collar, one-seventh service and three percent farm workers (the U.S. in 1980) is a long way from the 40 percent farm, 30 percent blue collar, 20 percent white collar, and 10 percent service employment structure of 1900. The only significant intersectoral shifts left are those out of the blue collar ranks. No shift within the white collar ranks will ever be so drastic in its effects as the intersectoral shifts of the past. Whatever a white collar worker does in the future, interpersonal relations and information processing are likely to be the main elements in its job content. Repetitive work will remain in manufacturing and in clerical work, but only as long as people will work for less than machines would cost to perform work they could be designed to do. Low-level jobs will remain which are too unstructured and unroutinized to be economically mechanized. Interpersonal relations is the primary area beyond the scope of the machine. But the conceivable range of jobs in that latter category, along with all that will remain of the rest, is sufficient to absorb all of those who will want to work far into the future, assuming that purchasing power needs are met by public policy.

There is a simple answer to the question, "Is the nature of work changing?" It already has. It, of course, continues to change but the radical change encompasses the preindustrial-industrial-postindustrial transition. The change from the arduous, lengthy , low productivity but relatively unstructured work of subsistence agriculture to the less arduous, more productive but highly structured industrial employment and on to the varied but generally less arduous and less structured service work of the present represents a direction of change which will not reverse. Farm work remains, less arduous, somewhat more structured, still long but not drastically changed

despite the drive toward high use of machinery, increased productivity, and fewer workers. Manufacturing work has tended to become somewhat less arduous but not more challenging. That is where most of the complaints of repetitiveness are and where most of the job enrichment action is -- but it is slowly declining as a proportion of all of the work there is to do, while the proportion of professional and service work is increasing, and involves considerably more people than manufacturing and other goods producing activities. There is a great deal of repetitive white collar work, but it is subject to the same cures of automation and job enrichment as other repetitive work. There are many distasteful service jobs. But the thrust is clearly toward lowered physical effort, more pleasant work surroundings, greater on-the-job autonomy and somewhat fewer annual working hours on the job. The picture is not an entirely sanguine one. There is much of the arduous, distasteful, the highly structured left but a steadily rising proportion find themselves doing work that is inherently pleasant and challenging. There are an increasing number of people doing work they would gladly do for nothing if they could afford it -- and more can afford it. The gifted and talented are the most likely to end up in that happy state.

If work is becoming more, not less attractive, why so much concern about the question, "why work?" The answers are probably affluence and overexpectation. The meaning of work is undergoing the more radical transformation, not from the nature of work, but from its changing necessity. Whether work is a "natural" state of man can be argued. Since work is necessary to society's existence, some rationale must be found to motivate people to produce. The basic motivation has always been survival, both individual and social. The great majority of people, historically and at present, have lived subsistence lives with deprivation and even starvation never far away. Affluence was available to the few only by extracting and amassing small surpluses of above subsistence product from many workers. The pressures for survival were

adequate to goad the average man into producing his own subsistence. Either force or some higher rationale was necessary to extract the marginal surpluses necessary for personal luxury or national power to the few.

Divine calling (the original definition of vocation) was such a justification. God put priests, lords, and serfs in their station and will reward in the hereafter their acceptance and pursuit of it. One need not blame himself for low status and could even gain satisfaction along with promised salvation from outstanding performance of humble tasks. The puritan or protestant ethic is better described as an acquisitive rather than a work ethic. Earn, be frugal, save and invest was a code for actual or potential capitalists, not industrial workers. Demonstrating that one was among the elect of God by evidence of material blessings could not hold much comfort or motivation for the latter. Religiously, work could be punishment for the original sin and a defense against the sin of idleness. Practically it was a necessity, deliberately structured to be as simple and as intrinsically unrewarding as possible.

The fact is that on a little but growing island in time and space encompassing the United States, Western Europe and Canada and beginning to spread to Japan and the Soviet Union, for the first time a group of people have been able to look up from the grubby task of just staying alive. They can ask, "what is it all about?" They can survive on far less effort than their forebears if they are willing to accept the standard of living of those forebears. Productivity has not become infinite and never will. Necessities and luxuries are not free goods, and anyone who does not produce is still a parasite on the system. However, the relative burden he poses is lighter. Society has designed many protections against the insecurities of industrial and postindustrial society, and the person who wants to cheat on the system can use these protections to survive without work. However, he still does so at the penalty of social ostracism.

It is only speculation at this point that there is a possibility that this relatively

permissive economic situation may end. Most social conflicts in the U.S. have historically been resolved by enlarging the economic "pie" through economic growth so that it has rarely been necessary to fight over redistribution of wealth. If we approach natural resource limits, everyone's gains will be at everyone else's expense. Fortunately, we have not yet arrived at that painful extreme.

There is reason to think the puritan ethic is withering away, less in regard to willingness to work than in the reasons for working and in many non-work aspects of individual and social life. Available statistics do not support much of the scare talk about worker discontent. Labor turnover is not experiencing a secular rise, absenteeism is up about 10 percent over a five year period. Strike activity can be explained by a variety and circumstances and little of it is related to working conditions issues. Productivity has been down and back up cyclically, following its familiar pattern. Labor force participation has not declined for men during their out-of-school, pre-retirement years and has risen for women as noted.[3] The change seems to be more in the reasons for working -- the erosion of the stern rural commitment to struggle with life and prevail. But there is no evidence that we work less because we enjoy it less. To the extent we work less, it seems to be simply because we can afford more leisure.

The overexpectation comes from too much publicity to just what has happened. A more comfortable and affluent world is being created but not as rapidly as journalistic imagination has painted. Word pictures of a world where machines do all the producing are a little frightening but not at all unattractive. Those jobs which are intrinsically attractive are increasing in number but not as rapidly as people have been led to expect. Education has been advertised as an almost certain ticket into that brave new world but it has not been able to deliver all that was promised for as many as expect the rewards. Even the best of jobs require some discipline and this fact has

[3] Harold Wool, "Whats Wrong With Work in America?", Monthly Labor Review, March 1973, p. 41.

not been prominent in the glowing promises. Few jobs are as physically pleasurable as recreation. The pleasure is in the accomplishment and many have not been educated to value that. There have also been disappointments in enjoyment of the material rewards of economic success. To be rich when all else are poor is to enjoy conspicuous as well as substantive consumption. To be well off when everyone else is, is to compete for space at service, recreation and other facilities. The antidote of realism is a necessary part of career education for the gifted and talented, as well as for anyone else who would be reasonably satisfied with work life.

Industrial man has struggled with remarkable success against the biblical curse "By the sweat of thy face shalt thou eat thy bread". For most, only recreation and non-work exercise generate that excretion now. So thousands who studied and schemed to avoid physical work, arise as early as their farming ancestors to jog through city streets to generate life-preserving sweat.

The preindustrial work ethic defended restricted status while leaving room for pride in humble accomplishment. The industrial ethic was a joyless work for work and income sake. However, pride in consumption has largely offset pride in production for those whose work was not inherently pleasurable. Homes, cars and expensive leisure could compensate for much. American unions have been able to push up wages until many jobs considered demeaning in other cultures rise in acceptability and even become attractive -- note plumbers and, in a few cities, garbage men. That much of the distasteful work has been conceivable by those doing it as temporary has made it more bearable -- youth getting their first job experiences, women mingling employment sporadically with homemaking, older workers and skid row types on the way down.

The industrial work ethic also emphasized goods production and, with notable exceptions of educational and medical personnel, demeaned personal service. The

shift to services came because, in a relatively affluent society, enough of the demand for goods was filled that services became of higher priority in determining the quality of life. The work ethic of the future must exalt human service and justify leaving to machines what machines can best do. Work's definition must grow from paid activity in earning a living, to all productive activities in service to oneself or others. A work ethic differs from work values. The former is imposed by society to get its necessary tasks done; the latter are internal to the individual. To encourage the development of values which can accept as dignified the grubby work which remains a necessity within society, will require new concepts of service. Yet more and more tasks will be intrinsically satisfying and even enjoyable. For at least the last century, the gifted and talented have been attracted to business and money-making. But the more wealth one has, the less the value of an additional dollar. There is only a marginal difference between the pleasures of driving a Cadillac rather than a Buick or even a Ford. The lifestyles of the rich are not that much different from those of the rest of the upper one-fourth of the income distribution. There is already evidence that a larger proportion of those who could be described as gifted and talented now seek with satisfaction careers in educational administration, social service and government. A set of values which gives satisfaction from human service while bridging the social gap which could continue to grow between the lower and higher levels of the occupational structure will be no mean accomplishment.

To the extent there is dissatisfaction in the workplace, the cause is undoubtedly overexpectation rather than a worsening of job content. To provide an understanding of reality and a choice between accepting or changing it is a traditional role for education. Where individuals have worked out of necessity, there is now a measure of choice for some. But society has provided no alternative to achievement as a measure of self-worth and self-esteem remains a basic requirement for human happiness.

Achievement is not measured only in the job market, but whether paid, volunteer or self-initiated, achievement -- of any kind -- is, after all, work.

A work ethic is the social undergirding of individual work values. When the appropriate new ethic is developed it will undoubtedly have as its key words, "service" and "self-fulfillment". The primary task of career education for the gifted and talented should be to aid those who could get the best of jobs and find them unsatisfying to see themselves becoming the "masters of all by being the servants of all".

IV: IDENTIFICATION AND CHARACTERISTICS OF GIFTED AND TALENTED STUDENTS

Attempting to find an adequate means of identifying the gifted in the 1970's is no easy task. One finds recommended procedures as diverse as using the "top 3% of the population"[1] on standardized achievement and I.Q. tests and a "responsive environment approach in which intellectual and creative potentialities would be assessed in situations which the child initiates."[2] A study of the literature and of the state laws for gifted children reveals many definitions based on an I.Q. score or high performance on achievement measures. However, there is increasing evidence from these same sources that definitions are being broadened to include a wider range of outstanding traits and thus to utilize a variety of means of identification.

Although the concept of giftedness is much broader today than it was during the early part of this century, the most widespread conception of giftedness in our culture continues to be expressed in terms of those abilities and expressions of high level performance that contribute to success in academic pursuits. The main body of findings about academically gifted youngsters is derived from the monumental studies of Lewis M. Terman. In a longitudinal study covering a period of more than 35 years, Terman made an intensive study of the lives of more than 600 gifted youngsters. These youngsters ranged in age from 2 years to thirteen years, and their IQ's ranged between 135 and 200 points. Terman also compiled a comparable body of relevant data for a control group of approximately 600 unselected youngsters. Although Terman's population included a wide range of racial and social groups, his sample was somewhat biased in favor of persons of Anglo-Saxon and Jewish ancestry.

Teachers of the gifted and control group populations were asked to complete a comprehensive rating form dealing with the various aspects of the quality of school work. Teachers were asked to rate the quality of work in various subjects for

gifted and control group children.

Gifted children tend to earn higher ratings in those subjects which require abstract thought, self confidence, the ability to adapt oneself to changing circumstances, and quickness of mental processes. Their ratings are only slightly above average in those subject matter areas which depend primarily upon manual dexterity. When teachers were asked to report reasons relating to weaknesses in various subjects, writing, art, and handwork accounted for 68 percent of the weaknesses reported for the gifted as against 16 percent for the control group. The control group children were frequently cited for weaknesses in subjects requiring abstract thought such as arithmetic, reading, English, and history. Teachers were also asked to grade the attitude toward school of gifted and control group students.

In school achievemnt, a gifted child tends to master the work of 3 or 4 grades in a single year and the actual length of school attendance seems to play little part in determining school accomplishment. In general the average gifted child in Terman's study mastered the subject matter of instruction to a point 40 percent above his chronological age. In an analysis of scholastic and occupational interests of gifted and control group students, Terman found that gifted students were more interested in subjects which are abstract rather than practical. Positive interest ratings were given to dramatics, literature, reading, history, games and sports, and physical education. Negative ratings were given to painting, grammar, penmanship, and physiology and hygiene. Gifted students showed a greater preference for professional, semi-professional, artistic, public service, and agricultural occupations than the controls who showed a greater preference for mechanical, clerical, and athletic occupations and occupations related to transportation. Almost twice as many gifted children as control group children were interested in collecting things such as stamps, coins, rocks and other articles of scientific

interest.

Programs established for gifted students following Terman's study used IQ scores and achievement test cut-offs as criteria for identification. While teacher identification was used, Terman's study had cast considerable doubt on the reliability of such recommendations. Identification of talented was not a prime consideration because public education did not generally encompass the talent areas. A few specialized programs, essentially in the urban areas, did focus on talent development using performance and audition as criteria for identification. The High School of Music of Arts in New York City is an example of such a program.

Although the Terman research provides what is frequently considered the most reliable guide regarding the characteristics of gifted children, there are reservations about the study. These reservations exist because of the evident bias of the Binet against the disadvantaged population and because of the creativity research of the 60's. Follow-up studies of Terman's gifted subjects revealed that while they achieved relatively high academic status, very few became outstanding in the arts, sciences, or humanities.

The work of J. P. Guilford demonstrated 120 different intellectual abilities, many of which are not included on an IQ test. Concern about these omissions was demonstrated by Getzel's and Jackson's study Creativity and Intelligence, which highlighted creative abilities of students who did not score as high as the group identified as gifted by the narrow definition. Similiar concern about the shortcomings of IQ tests for predicting creativity came from the research of Roe, Taylor, and the Institute of Personality Assessment of California at Berkeley, all of which dealth with the study of the cognitive and personality variables present in creative artists, scientists, and architects.

As a result of the "creativity" boom, additional identification measures were

developed or implemented. Guilford's tests, the Torrance Test of Creative Thinking, biographical inventories, creativety checklists, and problem-solving and critical think measures are examples of instruments frequently used in selecting students.

Torrance, Bruch, Fliegler, Renzulli, and others have been concerned not only because creative youngsters were being excluded from gifted programs, but also culturally different and disadvantaged children were also being excluded by rigid IQ selection procedures. Bruch has modified sections of the Binet and proposed other devices for identification and developmentof the gifted disadvantaged.[3] On the basis of research studies carried out with disadvantaged groups, Torrance has identified the following set of creative characteristics which he found to occur with relatively high frequency among disadvantaged children:

1. High nonverbal fluency and originality.
2. High creative productivity in small groups.
3. Adeptness in visual art activities.
4. High creativity in movement, dance, and other physical activities.
5. Ability to be highly motivated by games, music, sports, humor, and concrete objects.
6. Language rich in imagery.[4]

The Sub-Cultural Indices of Academic Potential by Grant and Renzulli is another instrument designed to take account of problems of test bias, the cultural distinctiveness of minority group members, and the growing concern on the part of high schools and colleges to identify high potential minority group students for supportive educational programs.[5] The instrument consists of 145 items which ask students to indicate how they feel about themselves and how they would react in situations that are common to their every day experiences. There are no right or wrong answers

to the SCIAP items, but rather, the instrument yields a profile that points out student preferences and learning styles in areas such as: the organization and management of information, commitment to social responsibilities and leadership, flexibility in social situations, originality in cultural context, initiative and persistence, self concept, attitudes toward education, and support of family and school toward continuing education.

The broadening concept of giftedness is reflected in the U. S. Office of Education's definition:

> Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contributions to self and society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination:
>
> 1. general intellectual ability
> 2. specific academic aptitude
> 3. creative or productive thinking
> 4. leadership ability
> 5. visual and performing arts
> 6. psychomotor ability[6]

Dr. Sisk at the National Invitational Seminar enlarged upon this definition by explaining that leadership in the field of gifted education, particularly at the national level, is "wrestling with or looking at giftedness as an umbrella term which would include types of giftedness but within which there would be much overlap."[7] As early as 1965, Miriam Goldberg stated: "It would appear that few, if any, creative productive thinkers will fall outside the top 20% of the population on the IQ distribution. The top quintile will thus remain the essential pool from which high level talent of all kinds will have to come."[8]

Gowan has suggested a multidimensional type of identification in order to select the talent reservoir in the school program. He makes use of teacher identification, group test screening, achievement, batteries, and a nomination system to form a

"reservoir" or talent pool. However, for final selection he reverts to individual Binet Testing.[9]

Bruch suggests case study identification using most of the Gowan list plus tests or ratings of specific talent and observations and records of social leadership in school, extracurricular, and community activities.[10]

The seminar group at the National Invitation Seminar on Career Education for the Gifted and Talented noted that formal criteria procedures for identification of talent continue to be elusive. Performance remains the primary mode for talent identification in most of the arts. Some specialized procedures such as the Seashore Test are useful in some instances. However, practitioners in talent areas continue to feel performance criteria are the most effective.

Several members of the panel reported attempts are being made to move toward procedures to quantifying elusive aspects of performance so that individuals not as skillful in a specific talent area may be able to help identify children with talent potential. Once identified persistence and excellence can aid in further selection procedures.

As educators strive to improve present identification procedures and better understand the concept of giftedness and talent certain recommendations emerge. First, there is a definite need to promote the coupling of definition and identification to purposes of program. That is, identification procedures should be selected that are germane to the program.

Secondly, knowledge about cognitive development and the development of talent is expanding as is concern for other characteristics relevant to motivational and personality variables. For example, Brandwein noted that "persistence" and "questing" were significant factors in the completion of his four year science, mathematics, and language operational approach program.[11] "In a recent study in Connecticut the gifted characteristics of commitment and resourcefulness plus the depth of determination were considered crucial factors in identifying students for

independent study."[12] Therefore, definitions and program must reflect this increasing knowledge.

Thoughtfully prepared procedures of identification which have been utilized and assessed such as those used at the Research and Guidance Laboratory for Superior Students at the University of Wisconsin provide models for improvement.

Despite what has been written about inadequacies of teacher judgments in identifying superior students, there is considerable evidence to indicate that if they were given some instruction about what to look for and provided with some cautions about avoiding common errors, they can do the task very effectively. No procedure is perfect, and some good students are likely to be overlooked under any system; but a procedure such as the one outlined below has the merit of looking at students from several angles rather than depending on short and limited samples that the use of tests alone provides.

Teachers utilized the following guidelines. They were reminded that a superior student may not necessarily meet all the following criteria, but he will usually meet some combination of them:

1. Uses large vocabulary easily and accurately.
2. Is effective in spoken and written communication.
3. Has a rich reading background, and shows evidence that he thinks about his reading and likes to discuss it.
4. Shows a wide range of interests, or in exceptional cases a heavy concentration on one.
5. Spends time beyond usual assignments or schedules on things that interest him.
6. Spends much time on special projects of his own.
7. Performs significantly above grade level in school subjects.
8. Usually receives good marks in school classes.
9. Tends to figure out what is wrong with an activity and show how it could be done better.

10. Gives refreshing twists to even old ideas.

11. Shows little patience with routine procedures and skills.

12. Asks penetrating questions, particularly about causes and reasons.

13. Likes to seek answers to problems and puzzles.

14. Is quick to recognize relationships.

Although there is some variation in how local schools utilize the above criteria, all tried to stress a multiple-criteria approach, involving both objective measures and subjective judgments of those faculty-members who knew the students best. One school identified its students in the following manner:

STEP 1. All ninth-grade teacher are asked to nominate, with criteria similar to the above in mind, all the students they consider to be superior learners in their lcasses. (They are cautioned to consider for nomination even those students who cause disciplinary difficulties and those who may be apathetic if, despite these characteristics, they have shown that they can learn well.)

STEP 2. Counselors list all students who are nominated by the teachers and note the number of times each student has been named.

STEP 3. Scores on tests of mental ability and achievement are added to the list for each student along with an indication of whether or not he has been on the high honor roll, the regular honor roll or has not been on it.

STEP 4. The list of nominees with the number of times nominated, test scores, and honor roll standing is resubmitted to all teachers.

STEP 5. Teachers rate any students they would like to renominate (or nominate for the first time even if they had overlooked them at the first step) on the following scale which was devised for the purpose. (Teachers are encouraged to interview the students before they rate them.)

CHECKLIST

Student's Name_____ Date_____

Circle a number of the scale at a point you think the pupil under consideration rates in the characteristics named. The scale numbers should be interpreted as follows: "1" indicates below average, "2" indicates average, "3" indicates above average, "4" indicates well above average, and "5" indicates exceptional.

	Low				High
High academic achievement	1	2	3	4	5
Advanced vocabulary and reading level	1	2	3	4	5
Expressive fine arts talent	1	2	3	4	5
Wholesome personal-social adjustment	1	2	3	4	5
Physical competence	1	2	3	4	5
Superior intellectual ability	1	2	3	4	5
Effective work independently	1	2	3	4	5
Persistent curiosity	1	2	3	4	5
Strong creative and inventive power	1	2	3	4	5
Special scientific ability	1	2	3	4	5
High energy level	1	2	3	4	5
Demonstrated leadership abilities	1	2	3	4	5
Well-developed mechanical skills	1	2	3	4	5

Please comment or list other reasons you care to as to the "why" of your choice.

Is this student your 1st, 2nd, 3rd, or 4th choice? (Circle one)

Teacher's Signature_____

STEP 6. A guidance committee composed of four teachers, two counselors, and the vice principal study all the records (ratings, test scores, number of nominations, honor roll membership, and written comments by teachers) of all the nominees and select those whom they considered to be superior.

STEP 7. The final selections are reported to the teachers at a faculty meeting.

The procedure described above has the advantage of giving consideration to the opinions of all ninth-grade teachers and keeps them informed about the school's effort to make special efforts to recognize students' superior performances in all fields. It gives due consideration to test performances. (The average IQ of the students selected by the process described above for one year was 131 and the average percentile on the general achievement test was 95.) It also recognizes good academic performance in several areas.

In a procedure of this type, there is always the risk of overlooking the nonconforming student or the very bright student who does not perform at a high level in classes. It has been observed that as teachers become more aware of this possible difficulty, they tend to nominate such students and provide comments

in defense of their nominations. They may indicate that they have evidence that one of their students is a superior learner even though the school has not reached him. The procedure could possibly result in the failure to recognize a highly creative student or the one who performs at an exceptionally high level in one area, but again, as the teachers become more aware of these difficulties they are less likely to overlook such students. And the procedure described above gives them an opportunity to present evidence in justification of their nomination of a particular student.

Additional criteria have been employed as desirable, depending upon the community, the individual students being considered, and the abilities and resources of the identification team.

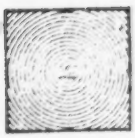
Another model which merits attention is Renzulli and Hartman's Scale for Rating Behavioral Characteristics of Superior Students. This instrument gives attention to learning characteristics, motivational characteristics, creativity characteristics, and leadership characteristics.

Insert Instrument Here

Obviously the strength within this recommendation lies in the use of multiple methods of identification. This permits attention to discovering the potential for multiple thinking processes, for recognition of a wide range of gifts and talents, for not excluding the very atypical characteristic, for recognition of the relationships of personality and motivational factors, and for identifying the potential for such culturally important items as leadership.

The search for more precise methods of identification and for an improved understanding of the attributes and characteristics of giftedness and talent must continue. At the first invitational conference, Goldberg noted the lack of valid

Out of the Classroom



Scale for Rating Behavioral Characteristics of Superior Students

Joseph S. Renzulli/Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____ Years _____ Months

Teacher or person completing this form _____

How long have you known this child? _____ Months.

Directions. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and place an X in the appropriate place according to the following scale of values:

1. If you have *seldom* or *never* observed this characteristic.
2. If you have observed this characteristic *occasionally*.
3. If you have observed this characteristic to a *considerable* degree.
4. If you have observed this characteristic *almost all of the time*.

Space has been provided following each item for your comments.

Scoring. Separate scores for each of the three dimensions may be obtained as follows:

- *Add* the total number of X's in each column to obtain the "Column Total."
- *Multiply* the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."
- *Sum* the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.
- *Enter* the Scores below.

Learning Characteristics ..... _____
Motivational Characteristics ..... _____
Creativity Characteristics ..... _____
Leadership Characteristics ..... _____

Editor's Note: The procedures used in constructing and validating this instrument are discussed in an article which appears on page 211 of this issue of *Exceptional Children*. Readers who are interested in using this rating scale are hereby given permission to reproduce pages 243 to 248 in a limited number (100 or less) if the reprints are not to be sold for profit.

Part I: Learning Characteristics

	1*	2	3	4
1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency. (National Education Association, 1960; Terman & Oden, 1947; Witty, 1955)	☐	☐	☐	☐
2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age). (Ward, 1961; Terman, 1925; Witty, 1958)	☐	☐	☐	☐
3. Has quick mastery and recall of factual information. (Goodhart & Schmidt, 1940; Terman & Oden, 1947; National Education Association, 1960)	☐	☐	☐	☐
4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick." (Carroll, 1940; Witty, 1958; Goodhart & Schmidt, 1940)	☐	☐	☐	☐
5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things. (Bristow, 1951; Carroll, 1940; Ward, 1961)	☐	☐	☐	☐
6. Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others. (Witty, 1958; Carroll, 1940; National Education Association, 1960)	☐	☐	☐	☐
7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and atlases. (Hollingworth, 1942; Witty, 1958; Terman & Oden, 1947)	☐	☐	☐	☐
8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers. (Freehill, 1961; Ward, 1962; Strang, 1958)	☐	☐	☐	☐
Column Total	☐	☐	☐	☐
Weight	1	2	3	4
Weighted Column Total	☐	☐	☐	☐
Total				☐

*1—Seldom or never
2—Occasionally
3—Considerably
4—Almost always

Part II: Motivational Characteristics

	1	2	3	4
1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.) (Freehill, 1961; Brandwein, 1955; Strang, 1958)	☐	☐	☐	☐
2. Is easily bored with routine tasks. (Ward, 1962; Terman & Oden, 1947; Ward, 1961)	☐	☐	☐	☐
3. Needs little external motivation to follow through in work that initially excites him. (Carroll, 1940; Ward, 1961; Villars, 1957)	☐	☐	☐	☐
4. Strives toward perfection; is self critical; is not easily satisfied with his own speed or products. (Strang, 1958; Freehill, 1961; Carroll, 1940)	☐	☐	☐	☐
5. Prefers to work independently; requires little direction from teachers. (Torrance, 1965; Gowan & Demos, 1964; Mokovic, 1953)	☐	☐	☐	☐
6. Is interested in many "adult" problems such as religion, politics, sex, race—more than usual for age level. (Witty, 1955; Ward, 1961; Chaffee, 1963)	☐	☐	☐	☐
7. Often is self assertive (sometimes even aggressive); stubborn in his beliefs. (Buhler & Guirl, 1963; Gowan & Demos, 1964; Ward, 1961)	☐	☐	☐	☐
8. Likes to organize and bring structure to things, people, and situations. (Ward, 1961; Gowan & Demos, 1964; Buhler & Guirl, 1963)	☐	☐	☐	☐
9. Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people, and things. (Getzels & Jackson, 1962; Buhler & Guirl, 1963; Carroll, 1940)	☐	☐	☐	☐
Column Total	☐	☐	☐	☐
Weight	☐	☐	☐	☐
Weighted Column Total	1	2	3	4
Total			☐	

Part III: Creativity Characteristics

	1	2	3	4
1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything. (National Education Association, 1960; Goodhart & Schmidt, 1940, Torrance, 1962)	☐	☐	☐	☐
2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses. (Carroll, 1940; Hollingworth, 1942; National Education Association, 1960)	☐	☐	☐	☐

3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious. (Torrance, 1965; Gowan & Demos, 1964; Getzels & Jackson, 1962)

4. Is a high risk taker; is adventurous and speculative. (Getzels & Jackson, 1962; Villars, 1957; Torrance, 1965)

5. Displays a good deal of intellectual playfulness; fantasizes; imagines ("I wonder what would happen if. . . ."); manipulates ideas (i.e., changes, elaborates upon them); is often concerned with adapting, improving, and modifying institutions, objects, and systems. (Rogers, 1959; Gowan & Demos, 1964; Getzels & Jackson, 1962)

6. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others. (Torrance, 1962; Gowan & Demos, 1964; Getzels & Jackson, 1962)

7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity. (Torrance, 1962; Rothney & Coopman, 1958; Gowan & Demos, 1964)

8. Is sensitive to beauty; attends to aesthetic characteristics of things. (Wilson, 1965; Witty, 1958; Villars, 1957)

9. Is nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different. (Carroll, 1940; Buhler & Guirl, 1963; Getzels & Jackson, 1962)

10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination. (Ward, 1962; Martinson, 1963; Torrance, 1962)

Column Total				
Weight				
Weighted Column Total	1	2	3	4
Total				

Part IV: Leadership Characteristics

	1	2	3	4
1. Carries responsibility well; can be counted on to do what he has promised and usually does it well. (Baldwin, 1932; Bellingrath, 1930; Burks, 1938)				
2. Is self confident with children his own age as well as adults; seems comfortable when asked to show his work to the class. (Drake, 1944; Cowley, 1931; Bellingrath, 1930)				
3. Seems to be well liked by his classmates. (Bellingrath, 1930; Garrison, 1935; Zeleny, 1939)				
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with. (Dunkerly, 1940; Newcomb, 1943; Fauquier & Gilchrist, 1942)				

5. Can express himself well; has good verbal facility and is usually well understood. (Simpson, 1938; Terman, 1904; Burks, 1938)	☐	☐	☐	☐
6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed. (Eichler, 1934; Flemming, 1935; Caldwell, 1926)	☐	☐	☐	☐
7. Seems to enjoy being around other people; is sociable and prefers not to be alone. (Drake, 1944; Goodenough, 1930; Bonney, 1943)	☐	☐	☐	☐
8. Tends to dominate others when they are around; generally directs the activity in which he is involved. (Richardson & Hanawalt, 1943; Hunter & Jordan, 1939; Bowden, 1926)	☐	☐	☐	☐
9. Participates in most social activities connected with the school; can be counted on to be there if anyone is. (Zeleny, 1939; Link, 1944; Courtenay, 1938)	☐	☐	☐	☐
10. Excels in athletic activities; is well coordinated and enjoys all sorts of athletic games. (Flemming, 1935; Partridge, 1934; Spaulding, 1934)	☐	☐	☐	☐
Column Total	☐	☐	☐	☐
Weight	1	2	3	4
Weighted Column Total	☐	☐	☐	☐
Total				☐

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measures to identify the potential of students who have outstanding potential and are culturally different. Fliegler[13] suggests that attempts be extended to "identify the gifted child before school entrance based upon criteria which are not weighted so heavily on verbal I.Q. scores. Perhaps a composite of psycho-motor dexterity, creativity score and curiosity index can be determined." He further suggests that "consistent identification procedures should continue through junior high school." He stresses the need for teacher education programs at colleges and universities to prepare teachers to function in the identification of and program development for the gifted child who is culturally different. Meeker[14] addresses herself to the above point in her report of the work of Hatch in the Los Angeles Schools in which he taps areas of performance other than the academic. He found that teachers who would have indicated that prior to his project "that there was practically no giftedness in the school were able to identify a potential 140 students in the basis of search criteria developed by Mr. Hatch, using data on correlate characteristics of giftedness." Consistency in opportunity for those identified is as important as the development of valid identification procedures, for identification without provision is a useless waste of human resources.

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Chapter V

CAREER DEVELOPMENT PROBLEMS OF GIFTED AND TALENTED STUDENTS

Introduction

Generalizations, supporting data, and illustrative examples included in the following discussion have been drawn primarily from research findings and case materials of the Research and Guidance Laboratory for Superior Students, University of Wisconsin. Over the past fifteen years, members of the Laboratory staff have carried on a longitudinal research-through-service program involving some 3000 gifted and talented young people from 90 Wisconsin secondary schools. Complete descriptions of the Laboratory program are to be found elsewhere (Rothney and Sanborn, 1966; Sanborn, Pulvino and Wunderlin, 1971). The methodology used to select students for participation in this program is described in Chapter IV and a generalized description of how the program operates is reported in Chapter VIII of this book. Here, an attempt will be made primarily to describe career development problems of gifted and talented students as these have been identified, over the years, in this program.

The concluding pages of this chapter attempt to present some general thoughts and ideas regarding career development of gifted and talented persons that combine the findings from the rest of this chapter with thoughts of seminar participants in the National Invitational Seminars on Career Education for the Gifted and Talented which led to production of this book.

Preliminary Thoughts

Some problems of career development are common to nearly all young people, but there are some which seem to be special problems of the gifted and talented. The fact that the gifted usually possess many potentialities and varied interests complicates their selection of a career. Expectations of parents, teachers, friends, and of society in general,

operate to restrict their range of career choices and to pressure them to to achieve high levels. Most careers they consider seriously are long-training occupations calling for early commitment and heavy investment prior to entry. Finally, issues and conflicts concerning the role of women in work, home, and society which are presently of concern to many American women are of concern to virtually all gifted and talented young women, and have been for many years. In the discussion which follows some general statements and findings are presented concerning the several special problems, and some suggestions for attempting to alleviate these problems are given.

Multipotentiality

Career choice is often a difficult problem for young people who possess many interests and competencies (Sanborn and Wasson, 1966). Many children who are classified as gifted and talented show these qualities of multipotentiality. Although there are some individuals who show both ability and interest concentrated in a single area, these are by far in the minority among the total group of children whom we call gifted. Typically the gifted and talented person can succeed in many areas, and typically he or she will show interest in a wide variety of things. The following statements, the first written by a twelfth-grade boy and the second by a girl, illustrate this point:

"I have found that if I apply myself I can do almost anything. I don't seem to have a serious lack of aptitude in any field. I find an English assignment equally as difficult as a physics problem. I find them also to be equally as challenging and equally as interesting. The same goes for math, social studies, music, speech, or any other subject area . . . Nothing is so simple for me that I can do a perfect job without effort, but nothing is so hard that I cannot do it. This is why I find it so difficult to decide my place in the future. Many people wouldn't consider this much of a problem; but to me, this lack of one area to stand out in is a very grave problem indeed."

* * * * *

"When I look for a career in my future, the clouds really thicken. There are so many things I'd like to do and be, and I'd like to try them all; where to start is the problem. Sometimes there is so much happiness and loneliness and passion and joy and despair in me that I practically take off over the trees and when I get like that I love to write poetry. Sometimes I go for months without writing any, and then it kind of bursts out of me like spontaneous combustion. I'll probably always be like this, but I would also like to be able to discipline myself enough to write more short stories or novels. I'd like to be a physical therapist, a foreign correspondent, a psychiatrist, an anthropologist, a linguist, a folk singer, an espionage agent, and a social worker."

There is much evident to indicate that during school years the multiple competencies and interests described by these young people are common among the gifted and talented. Although they may show some variation on aptitude and achievement test batteries, their scores typically exceed those of their age mates in virtually all areas covered by tests in common use. Only rarely is any performance so low as to suggest that the individual who attained it would be unlikely to succeed in either education or career requiring strong performance in the competency measured. Some indication of the tendency of gifted students to score evenly across a variety of tests can be seen in Table A below.

Table A

Standard Scores of Fifteen Randomly Selected Superior Students on Tests Administered over Four Years of High School

	Standard Scores of Individuals														
Tests	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
SCAT Verbal	42	60	60	61	43	52	50	61	60	46	52	56	60	63	60
DAT Verbal	45	57	60	55	60	55	57	59	60	64	57	57	64	65	54
Davis Reading (level)	44	59	61	56	48	56	53	54	56	58	56	49	66	64	49
Davis Reading (speed)	37	65	68	55	52	60	44	56	62	50	58	47	64	66	55
*Terman Concept Mastery	51	59	65	59	51	56	53	57	55	60	57	55	71	64	69
DAT Spelling	57	52	63	52	58	53	55	52	55	62	62	58	62	59	56
DAT Sentences	47	56	62	48	41	47	54	48	72	64	55	44	60	51	56
SCAT Quantitative	47	47	56	60	51	60	58	47	58	62	62	56	62	53	40
DAT Numerical	55	49	43	67	49	53	47	47	55	66	62	65	55	53	45
**Critical Thinking	41	54	58	65	54	62	54	33	66	65	55	55	63	38	56
DAT Abstract reasoning	59	59	63	53	55	51	51	69	72	66	63	51	63	53	53
Mean	48	56	60	57	51	55	57	53	61	60	58	54	63	57	54

* The concept mastery test uses only verbal items.

** Scores on the Watson-Glaser Critical Thinking Appraisal.

Standard scores in Table A were derived from the ratio of means to standard deviations of a group of 175 gifted twelfth graders who had taken the tests over a four-year period. The standard score mean was set at 50. In the population of students from which examples in the table were drawn, mean scores on all the tests used were above the 94th percentile according to published test norms.

Although there are a few marked departures of individual test scores from the students' own means, there is an obvious tendency to score at similar levels across all tests. Where differences do exist they may be due to factors other than differences in ability or aptitudes.

Construction of tests especially for use with the gifted has resulted in a few instruments on which bright youngsters show wider variation of performance both among students and across tests. At the Research and Guidance Laboratory for Superior Students, the difficult Terman Concept Mastery Test has been shown to yield an impressive spread of scores among 1,410 superior high school seniors. Their scores ranged from 25 to 174, with a mean of 73 (the mean for Stanford freshmen is about 79) and a standard deviation of 26. Two other measures developed at the Laboratory

have shown some promise for assessing differential performances in verbal and mathematical areas (Connell, 1963). These are the Wisconsin Inventory for Talented Students (WITS) Verbal and Quantitative sections. Thus far, however, attempts to show how WITS performances relate to success in different major fields of study after high school have produced negligible results. At this point there is no reason to believe that they would be useful at all insofar as career choice questions are concerned.

Nor are variable scholastic performances of much help to most gifted youngsters in their thinking about careers. As on tests, they tend to perform evenly in classwork across all the usual school subject areas. We can see from the following distribution of four-year high school grade point averages obtained from 313 superior students that most of them have averages so high as to leave little room for dramatic variation. Nearly one fifth had straight "A" records, and two thirds were above 3.50 on a 4.00 scale. GPA's presented here included all high school coursework, whether academic or not.

Four-year cumulative Grade point averages	Percent of 313 students attaining averages
4.00	18.8
3.90-3.99	17.2
3.80-3.89	12.5
3.70-3.79	12.5
3.60-3.69	8.0
3.50-3.59	6.4
3.40-3.49	4.5
3.30-3.39	6.4
3.20-3.29	1.9
3.10-3.19	2.9
3.00-3.09	2.6
2.90-2.99	1.3
2.80-2.89	0.9
2.70-2.79	0.9
2.60-2.69	1.3
2.50-2.59	0.6
Below 2.50	1.3

As figures above show, there are some gifted youngsters who do not get good grades in school. Sometimes we call such students "underachievers," and sometimes it is discovered that such a label fits. But sometimes also the reason for poor class performance can be traced to high development and deep interest in the subject, plus boredom and frustration with concepts presented and tasks required in class. Consider the following statement written by a boy who did not always get high marks in English:

> "Poetry and literature have to be an . . . experience unique to each individual, so that nothing 'is'great, but all 'are' great--relatively. If I am affected, then I am affected, and no snobbery of what ought to be can change it. If anyone can really feel anything from reading 'Trees' which 'is' a lousy poem, then they feel it. The teacher's job should be to make the student aware of his own feelings--the student's feelings--free him from thinking that he should like anything simply because he ought to like it. I suspect that most people think they ought to like 'Trees' because 'teachers' have palmed that kind of drivel off on them so much they think it isn't poetry if it isn't saccharine sweet and mock religious.
>
> "The teacher can help by providing a context, a point of view, and logical analysis, but the poem itself comes from inside the individual--each unique experience never again the same even for the same poem and the same individual. The best poems will force themselves into our consciousness long after the reading, and we will say, 'So that's what it meant,' or, "Now I see.'
>
> "I can't weep for Adonis, but I did weep for the Nez Perce Indians when Chief Joseph surrendered in Harvey Chalmers' Last Stand:
>
> > 'I am tired of fighting. Our chiefs are killed. The old men are all dead. It is the young men who say yes or no. . . . It is cold and we have no blankets. The little children are freezing to death. My people, some of them have run away to the hills and have no blankets, no food; no one knows where they are--perhaps freezing to death. I want to have time to look for my children and see how many of them I can find. Hear me, my chiefs. I am tired; my heart is sick and sad. From where the sun now stands I will fight no more, forever.'

"I write this all out to show that it is not the recognizably 'poetic' that necessarily has power. It can be almost anything in a context where emotion is allowed and there is a personal meaning. This is one moment of intensity that focuses all that comes before and all that will come after. Whatever the facts are I don't know, but I know how I felt."

This young man went on through college with a major in Library Sciences. He was active in journalism activities throughout high school and college. He is currently employed in a library. Although he had strong ability, creative talent, and deep appreciation of literature and poetry, he did not always appreciate what was expected of him in school. It would have been a mistake to assume either lack of interest or lack of ability in English and literature on the basis of classroom performances.

Across a variety of intellectual performances gifted and talented youngsters often show multipotentiality. But it does not stop there. Contrary to the popular stereotype of the gifted child who is physically soft, socially inept, and concentrated too much on intellectual matters, studies of 350 gifted boys and girls from 60 Wisconsin high schools revealed a highly active group of young people who were involved in a wide variety of social, athletic, community, and solitary activities regularly. Table B which follows contains a list of all daily and weekly activities reported by these youngsters over their four-year high school period.

Table B Percentages* of Superior Students Reporting Frequent Participation in Activities

Activity	Percent of boys reporting participation				Percent of girls reporting participation			
Grade	9	10	11	12	9	10	11	12
Organizations								
Student committees	34	48	54	77	49	60	72	90
School clubs	32	68	74	88	40	94	90	98
Scouts	28	16	10	8	24	14	12	8
School newspaper	14	16	20	28	28	32	42	44
Church-related groups	20	24	26	18	12	22	24	20
Cheerleader	0	0	0	0	20	10	12	10
Officer of an organization	31	46	52	66	43	51	66	84
Sports								
Baseball	88	65	80	78	50	51	44	42
Swimming	84	90	86	86	94	88	90	90
Basketball	80	84	84	92	52	59	49	54
Football	74	76	80	94	4	8	6	2
Skating	50	60	48	44	76	71	72	54
Ping pong	42	54	55	34	35	35	22	20
Roller skating	39	14	4	6	4	8	6	4
Fishing	38	66	56	56	15	28	10	10
Hunting	38	42	44	34	0	12	2	2
Tennis	28	38	44	42	34	42	38	46
Track	26	39	26	20	0	0	4	4
Skiing	20	18	16	12	10	12	16	18
Bowling	24	46	52	60	34	47	44	48
Pool and billiards	18	30	31	34	8	6	6	4
Horse riding	6	6	14	8	20	21	16	16
On school team	64	64	70	66	24	40	26	26
On out-of-school team	38	32	28	28	8	7	6	8

Activity	Percent of boys reporting participation Grade 9	10	11	12	Percent of girls reporting participation 9	10	11	12
Arts & Hobbies								
Care of animals	56	60	60	62	69	61	70	64
Mechanics	43	42	45	42	6	6	8	9
Drawing	34	34	32	34	58	47	34	42
Photography	32	32	31	30	39	45	30	18
Painting	10	4	2	6	27	14	10	10
Cartoons	18	26	22	20	12	16	12	16
Cartography	12	6	10	14	16	18	10	10
Gardening	12	22	20	12	23	25	34	20
Flower arranging	0	2	2	0	14	17	26	10
Woodworking	32	18	12	12	2	2	0	0
Model planes	20	12	4	6	4	2	0	0
Model boats	18	12	4	4	2	0	0	0
Model railroads	8	6	4	0	0	0	0	0
Radio, TV, equipment	8	8	12	10	0	0	0	0
Chemistry set	12	12	16	8	4	4	8	2
Miscellaneous								
TV comedy	94	98	94	86	85	96	96	82
TV sports	92	94	98	96	78	92	84	92
TV mysteries	85	88	86	76	90	80	82	62
Playing cards	66	74	76	64	42	46	42	38
TV, radio music	58	64	54	52	65	74	72	68
Dancing	58	68	76	68	84	85	84	84
Parties	36	32	51	56	61	68	58	56
Movies	46	48	49	64	69	72	74	70
Chess	34	30	28	38	8	6	14	8
Checkers	38	30	20	12	22	6	4	0
Crossword puzzles	34	26	20	22	39	21	28	22
Puzzles	20	22	18	18	12	21	16	10
Writing stories	16	18	12	18	26	26	24	26
Writing pen pals	10	8	15	14	43	40	38	44
Writing poetry	6	8	4	8	8	11	14	18

* All percentages rounded off to nearest whole numbers.

Activity	Percent of boys reporting participation				Percent of girls reporting participation			
Grade	9	10	11	12	9	10	11	12
Reading								
Non-fiction	56	74	64	72	61	67	58	67
Sports	56	44	42	42	30	14	6	8
Adventure	48	62	38	28	52	43	30	24
Comics	48	34	24	16	32	12	8	2
Mysteries	30	40	36	20	48	41	28	24
Biography	28	35	22	16	39	45	24	30
Careers	20	12	12	28	28	25	22	22
Romance	0	4	2	4	32	27	20	12
Animals	22	10	4	6	18	9	4	4
Historical novels	16	16	22	14	22	23	20	22
Movie magazines	8	6	4	8	29	18	12	6
Classics	14	20	14	16	18	19	26	42
Plays	10	12	6	12	24	25	10	22
Westerns	24	8	6	2	6	6	2	0
Mechanics	18	36	37	30	4	11	4	2
War	20	20	16	10	12	4	8	8
Music								
Playing an instrument	53	42	38	40	76	75	68	64
Music lessons	38	26	24	18	63	50	45	30
Group singing	24	34	34	54	66	60	60	68
Playing in a band	30	28	24	20	42	41	38	32
Choir	14	16	22	30	56	59	46	4
Glee club	6	8	6	8	22	20	20	22
Instrumental group	12	16	14	18	20	22	20	16
Orchestra	4	8	6	10	12	2	8	8
Solo singing	2	13	4	8	13	6	10	8

Percentages of students involved in the various activities illustrate how inadequate the "egghead" stereotype is. About two-thirds of the boys, for example, were on one or more varsity athletic teams. An equal percentage were, as seniors, officers in organized activities. One fifth of the girls were cheerleaders at least one year during high school, about one fourth were on a school athletic team, and the majority held leadership positions in organizations. Boys showed low involvement in such activities as glee club, orchestra, poetry writing, and the like; but in general the figures reflect a rich and varied pattern of involvement in athletic, social, creative, and recreational activities. It appears likely that even in activities not commonly associated with the gifted, their percentage of involvement surpasses that of the general school population.

Although multipotentiality is by no means characteristic of all gifted and talented individuals, it is characteristic of most. Their selection of careers cannot be predicated solely on interests and abilities. They may be encouraged in many directions by their teachers, parents, and friends. They see meaning in many pursuits. They show concern about many aspects of life. Thus they may have difficulty focusing their efforts and aspirations in directions which lead to fulfillment rather than merely to accomplishment. For some of them, a philosophy such as the one below, stated by a 17-year old girl, may be quite appropriate, but it is rarely heard:

> "My future, as I see it, is going to be interesting. I don't expect to settle down to one occupation and make that the primary interest in my life. Instead I will concern myself in a number of areas and devote some part of my life to each one of them. I shall probably have several . . . "careers." I may be earning my living doing biochemical research and writing a novel at the same time--or formulating my theory of education while writing a newspaper article on politics.

> "I'll try not to make the mistake of studying too many areas and accomplishing nothing. I expect to find about four or five general topics that fascinate me the most and really concentrate on . . . these . . . I'll have no qualms about dropping one interest and acquiring a new one. Without a doubt I'll find one job that will stay with me, and the other interests will remain in flux as I grow. My main goal is to satisfy my desire for studying what is vital to mankind and to utilize my abilities wisely. I am not of the opinion that narrowing my fields of endeavor is a good thing--at least not at this time. I shall have to gain more experience in science, writing, education, history, economics, and politics before I make any decisions.
>
> "This ought to take about 30 years."

Expectations

Over the past eleven years more than 2,000 gifted high school seniors in Wisconsin have written an impromptu essay entitled "The future as I see it, and my place in the future." They were given about 40 minutes to complete the essay, and no instructions other than the essay title were supplied. The overwhelming majority of these students have centered their discussion around career choice, and the meaning of the work that they will do. To most of them, the selection of an occupation is seen as a highly significant act. They do not seek merely an occupation in which they could do well and in which they would be "interested." They look for a career which is to be their principal means of self expression, whereby they may implement a philosophy of life.

The following essays and excerpts illustrate lines of thinking about careers which are common among these young people:

The Future As I See It And My Place In That Future

'George Gallup in his recently published book The Miracle Ahead, gives us the impression that we as a nation and perhaps the people of the whole world are standing on the threshold of an unprecedented era of prosperity and well-being. Dr. Gallup claims that breakthroughs in technology and medicine are ushering in the 'golden age,' and cites advances in the use of artificial organs and agricultural chemicals to support his hypothesis.

"Either by constitution or by choice, I tend to take a pessimistic attitude towards the future of this country and the world. I take this position because I take a rather dim view of human nature; and after all, we humans will be populating tomorrow's world.

"History reminds us that on occasion after occasion, man's progress towards mastering his own nature has failed to match his progress towards mastering his physical surroundings. With the discovery of gunpowder came the invention of bombs and guns; with the identification of microbes came germ warfare, etc. The more men used their minds, the more ways they found to destroy one another.

"Today, man is the same frustrated creature he always has been. Despite all of the lessons of the past, men still believe politicians who promise them something for nothing; they still cry for peace at any price until they realize what the price is; they still suppose that material comfort equals happiness, and that therefore governments can create happiness with a magic wand as it were. Yes, people are still being snared by the same illusions which have led and always will lead them to confusion and despair. And only education, real education, can lead the way out.

"This is where I hope to fit into the future. If I teach history, I won't merely teach it as a series of political events. I will urge young people to think about present problems in the perspective of the past, pointing out where man has blundered and where he has excelled. I will encourage them to shape a philosophy around a "sense of the past" and then force them to consider carefully and practically man's alternatives for the future. While man may be a lost race collectively, I think there still exists an opportunity for individuals to learn what the business of life is all about by learning first to think for themselves. To help individuals to become persons is a tremendous challenge, but is and always will be my goal."

* * *

"I am able to perceive the future of my own small world much more clearly than that of the entire world. For it is there, in my life which is concerned with myself and those immediately around me, where my main interests lie, and there where I must soon find my own place. But I am also aware of another responsibility. I must fit my future into the rest of the world. As I stand now, I can barely discern any clear image of that future. I am confused, because I have had neither the knowledge or experience to straighten myself out. This is why a higher education is in my immediate plans for my future; I am depending upon the broadening opportunities to be gained in college to guide me.

"The world's future as I see it is one of further misunderstandings and crushing realizations that we are not able to get along with our brothers. With all of the tremendous emphasis placed on the cold, impersonal, and abstracted facts of math and science, perhaps men have forgotten the most basic need for a solid foundation upon the basic principle of human understanding. My own future as I see it must have a supporting role in this foundation, and I must make it so by finding my place in my future.

"I am often concerned by the idea, prevalent in these United States, that because in a foreign country ways of life are different they are either silly or completely wrong. There is an urgent need to dispel the misconception that 'ours is the only way,' because it isn't. This opinion only reflects our own ignorance concerning a foreign culture, and lack of understanding of a strange people. It has been said that a language is the key to the understanding of a people. Because of my feelings as previously presented and because of a liking for learning a foreign language, I have chosen languages as my career field. What I plan to do with this career I am not certain. There is always the opportunity to teach. However, it seems that for me there is more to do with a language than teach it. I see in my future that it is my job to use a language to help me and others to establish a better-understood relationship.

"With these ideas I must find my place, and in my own small way fulfill my responsibility as I comprehend it. But certainly I am not strong and sure enough to do it along; no man is able to live life alone."

* * *

"Each of us has different motives. To me, it is important to be of some benefit to the world now and in future generations. For this reason, I have chosen the field of physics. One usually does not think of a scientist helping others as a nurse or social worker. Yet, in his way, perhaps he is more helpful. I realize that I would probably be a failure in the fields usually considered as helping others, but, perhaps, in physicis I can do something for the progress of the world.

"If I cannot benefit the world through my own life, I hope that by sharing my knowledge I can benefit it through the lives of others. For this reason, I hope to become a college teacher. In any case, I hope to be remembered for the good I have done for others, rather than a desire for personal gain."

* * *

"All these facts, laws, and formulae, however, will begin to wear on students and keep from them an element sought by the Egyptians, perfected by the Greeks and worshipped by the English romantic poets --beauty. There is still some beauty in the world about us, and man has not yet lost the ability of self-expression in creating new beauty. I feel that my place in the future as I see it, therefore, lies in helping others see that beauty through literature, to feel that beauty through music, and to find some way for them to express their true feelings, since their accomplishments in making war implements are not their feelings, but those of their senseless elders."

* * *

"The meaning of life is something that is impossible for me to grasp, but if I can do something important--something that furthers mankind, I will be satisfied. This satisfaction is the goal of my life. Perhaps I will never attain it, but I certainly must try."

* * *

"This decision of mine, to become a missionary, is not a hasty one or a reaction to a lost love. Sincerely, I am not trying to bury myself in the jungles, or to resign myself to life as an old maid. This decision is a result of a long, long battle within myself. I think I first made this decision in about 3rd grade. It sounded romantic then; plowing through hot, steaming jungles to bring the Word to natives just dying to become Christians. After that, I became interested in other careers and especially in archeology and medicine. I forgot about missionary work or at least put it out of my mind, until two years ago. At this time I tried to ignore it, because it would ruin my other plans. However, here I am now, with the firm resolution to become a missionary."

* * *

"To live is to serve. One accomplishes nothing unless he helps others."

* * *

"It only takes a few people to carry on, preserve, and 'make' culture, whereas it takes a majority to preserve a civilization. There are not enough men and women keeping our culture at a suitable level. I see my part at present as an appreciator and supporter of the arts; but who knows? Maybe someday I'll compose a symphony or write a book. This remains to be seen."

* * *

"I feel that part of my duty is to insure that life never loses its significance; man of today rarely thinks of why he does something or views life sub specie eternitatis. I'm for progress as much as anyone else, but I think that of much greater importance is that man remains human."

* * *

"I view society as an interdependent system, in which man must contribute to society as a whole if he is to derive the benefits from society. As a result, it is my obligation and intention to contribute to mankind on the basis of my abilities, personality, and interests.

"Basically, my education will center around the social sciences. Knowledge and talent in this field provides unlimited opportunity to be a meaningful member of society.

"These studies could lead me into law school if I decide that such an occupation would best meet the goals which I have set. At present, this career seems most suitable to my interests and abilities and, indeed, satisfies my interest in contributing to my fellow man.

"In any event, I hope to earn my place in society and to deserve the benefits therefrom."

* * *

It is not unexpected that these students would show such concerns in their career choice. We have taught them to do it. Recognition of giftedness or talent seems to result almost inevitably in both explicit and implicit presumptions that great things will be accomplished during education and career. Failure to do so, it is made clear, will be regarded as failure to live up to expectations of others, and failure to meet obligations to those persons, real or spiritual, who gave the gifts.

Gifted and talented children recognize and react to these high expectations. In terms of abilities and interests they can do many things; but in terms of expectations--both those of others and those they have internalized for themselves--they are limited in what they can choose. "As far as my career is concerned," one boy said, "I know that I have various obligations and duties which must be completed. These include duties to parents, community, school, and the larger society. It is my hope that I will be able to meet these obligations to others--but to my own satisfaction."

It is not uncommon for bright youngsters to recognize that there is a conflict between what they envision as a useful way to spend their time and the way others, and they themselves, expect time to be spent. The essay below, written by a girl, exemplifies this point of view:

> "My future is very undecided. I know what I'd like it to be. I'd like to move to England and live in the fog with a house by the sea. I'd like to write books under an assumed name and, if they were published, go out and ask people what they thought of them. They'd give me an honest answer because they wouldn't know it was I who had written them.
>
> "I'd like to have a little car to drive and a meadow to run in and a cat to be with. If I had to have a job, I'd like it to be something I could keep changing so it wouldn't get boring. I'd like time to be alone to think and be myself, and maybe, much later, someone to love.
>
> "However, that's only what I'd like it to be. Everyone knows dreams don't come true, so my future will probably be very much different. I'll go to college for four years and major in something like math. Then I'll teach high school for awhile and get married and have a bunch of kids. After they've grown up I'll probably get bored with staying home and go back to teaching. I'll probably be happy and maybe even accomplish something.
>
> "Now I'd like to take the rest of the space to apologize for the emotional outburst. It seems that every year I've been down here

> I write down what sounds good or what you're supposed to write. I don't mean that I don't believe what I write or that I'm insincere, I do and I'm not. But I only half-believe it, like I'm saying to myself that this is what you <u>should</u> do with your life, and if I keep saying it maybe I'll start believing it. Anyhow, as long as it's my last year I thought maybe I should let you know what I <u>wish</u> I could do."

For some, an attitude such as the above persists beyond adolescence and into adult life. One young man who completed his graduate study on a Woodrow Wilson fellowship and now teaches in a university gave the following answers on a follow-up questionnaire sent to him during college. More recent conversations with him indicate that the conflict stated here is still with him.

What would you *like* to be doing ten years from now?

Check *all* that apply.

39 ( ) Working in my chosen field.
40 ( ) In college finishing my bachelor's degree.
41 ( ) In college for advanced study.
42 ( ) Housewife.
43 ( ) Traveling.
44 ( ) Military service.
45 ( ) Uncertain.
46 (X) Other (explain) DOING PHYSICAL WORK DRINKING BEER, TALKING
47B WITH GOOD FRIENDS, LISTENING
48E TO GOOD MUSIC

What do you *think* you will be doing ten years from now?

Check *all* that apply.

49 (✓) Working in my chosen field.
50 ( ) In college finishing my bachelor's degree.
51 ( ) In college for advanced study.
52 ( ) Housewife.
53 ( ) Traveling.
54 ( ) Military service.
55 ( ) Uncertain.
56 (✓) Other (explain) TEACHING COLLEGE RAISING A FAMILY AND
57B HURRYING TO PUBLISH A BOOK TO
58E INSURE PROFESSIONAL SECURITY

Is there anything that might prevent you from reaching your goals?
Check *all* of the following which apply:

59 ( ) Nothing that I know of now.
60 ( ) My own limitations.
61 ( ) Lack of finances.
62 ( ) Unpredictable social events.
63 ( ) Unpredictable personal events.
64 ( ) Marriage.
65 (✓) Military service.
66 (✓) Other (explain) I HAVE TWO OPPOSING GOALS - ONE TO
67B CONTINUE IN HIGHER EDUCATION GET A Ph.D. AND THE
68E OTHER TO DO 46-47B 47E ABOVE. SINCE THE SECOND

Comments: IS UNREALISTIC & SINCE A PERSON CAN'T SHAKE HIS ENVIRONMENT, I WILL PROBABLY END UP ATTEMPTING THE FIRST EQUALLY UNREALISTIC & LESS FULFILLING GOAL.

1	2-6	7

What sources of inspiration and encouragement have made you want to succeed in college? Check *all* of the following which apply.

8 (✓) My parents.
9 (✓) Friends or people I admire.
10 ( ) Teachers.
11 ( ) My own personal ideals.
12 ( ) The value of education.
13 (✓) My desire for future security.
14 (✓) My particular career goals.
15 ( ) My religion.
16 ( ) Relatives (Other than parents).
17 (✓) My desire for social status that goes with a college education.
18 ( ) The fact that I received a scholarship.
19 ( ) My experiences at the Research and Guidance Laboratory.
20 ( ) No particular sources I know about.
21 (✓) Other (explain) I HAVE TO DO ESPECIALLY WELL HERE
22B BECAUSE I AM COMPETING WITH FRIENDS
23E AT BETTER SCHOOLS.

Underline the major source(s) you checked above.

Comments: I MUST BE NEUROTIC

A very few gifted and talented youngsters are able to understand the expectations held for them without feeling undue pressure to conform. Usually these individuals seem to possess the more "creative" styles of behavior found among the gifted. For her 40-minute impromptu essay on "The Future as I See It, and My Place in the Future," one girl submitted this, perhaps with tongue in cheek, but perhaps not:

"Ah, the future, as I see it,
Will hold problems for us, be it
Ten years hence or just a week from now.
But I possess the will to meet 'em;
I alone might well defeat 'em,
Though, of course, as yet I'm not sure how.

But when my big chance does arise,
You can bet I'll realize
My place in life's big all-important show.
If someone plays the various leads,
And someone else does all the deeds,
I'll come and sit somewhere in life's front row.

As active marchers pass me by,
With vict'ry flags araised on high,
The symbols of success and fulfilled word,
I'll be the first with smart salute.
I'll raise a cheer; I'll not be mute;
But I'll be standing over on the curb."

What factors operate to elicit a response such as this to the pressures of expectation felt by so many of the gifted and talented is not known. It does seem apparent, however, that whatever these factors are, they operate only infrequently.

Investment

For most gifted and talented individuals, the clearest avenue toward the career they want to develop is through higher education. They rarely see another route. No doubt part of this is due to expectations, but part of it is due also to the fact that higher education provides a reasonable liberal and professional base for entry into many occupations gifted youngsters select for their careers. Some occupations, such as physician, or teacher, or engineer are virtually impossible to enter without the credentials higher education affords.

Follow-up studies at the Research and Guidance Laboratory for Superior Students have shown that 98 percent of the males and 97 percent of the females who graduated from high school from 1961 - 1972 have gone on to college. Data on the earlier portion of this group shows that more than 70 percent have enrolled in graduate or professional study after receiving their first degrees. The proportion of men in graduate study exceeds the proportion of women, but for both men and

women the percent who enter graduate and professional schools far exceeds that expected of the general undergraduate population. Thus it appears that a majority of gifted and talented young people engage in long training periods before entering the world of work--longer even than is normal for the college-going population.

Selection of careers which require many years of expensive training calls for heavy commitment of the individual. Prolonged financial dependency, indebtedness, pressure to keep scholarships or fellowships, postponement of marriage and/or parenthood, and a starvation diet of material and recreational niceties are some of the problems which the gifted and talented face above and beyond problems common to all youth in making career choices. With all this involved, one must choose carefully. Once a few years along the career track, it becomes difficult to see the possibility of change.

Finally, there is the commitment of time. A gifted boy or girl of 16 years may well possess the physical, intellectual and emotional maturity of an adult. At 18, according to law, he or she will be an adult. Yet such an individual may have to look ten years ahead to anticipate the day when the full responsibilities and compensations of independent adult life may be assumed. For some this is no problem. For others it is a problem so great as to cause them to give up career plans. A girl who dreams of becoming a physician, for example, may encounter a real dilemma when she contemplates the impracticability of starting her own family before age 30. Many bright young girls consider careers in medicine, but few achieve them, partly because of the time problem.

Of Concern to Women

It is fashionable in this day and age to mention problems of career choice and development which are unique to women. Among those who work with the gifted and talented, however, there has been a lively awareness of such problems for a long time. It is no more fashionable to talk about them now than it has been in the past. Most of the issues and conflicts concerning the woman's role in home, career, and society which have recently been brought to light among the general public have been in the thoughts of gifted and talented women, and of those who work with them, for many years.

Since the needs of women are being well documented elsewhere, it seems superfluous to go into them here--except to make one point. Too many young women still see marriage and career as two mutually exclusive things. "Unlike many girls," one senior said recently, "I'm in no hurry to get married. I want to travel and have a career before I settle down." "I want to hang on to this phase of my life as long as I can," says a young teacher. "When the haze clears I see myself hard at work in the kitchen . . ." These statements, coming as they do from two bright and educated girls in an enlightened generation representative as they are of many such young women, indicate that the goals of the women's liberation movement have not yet been achieved.

Table 6 below illustrates the point further. Data contained in the table were originally compiled by Mowsesian, Heath, and Rothney (1966) for another purpose. Of these 50 young women, only three were engaged in an occupation not commonly associated with female workers (physician, veterinarian, chemist) seven years after high school. Twenty-four were employed in "feminine" occupations (e.g., teaching, nursing, librarian, occupational therapist), and an additional seven were married and otherwise unemployed. Four were graduate or professional students. One was an undergraduate student in home economics. The remaining 13 were involved in jobs which have not been "sexed"

TABLE C

Career Preferences of Fifty Female Superior Students in High School and In First, Third and Seventh Years After High School Graduation

Case Number	9th grade	10th grade	11th grade	12th grade	First Year after high school	Second year after high school	Seventh year after high school
1	Uncertain	Mathematician	Librarian	Geneticist	Uncertain	Occupational therapist	Occupational therapist
2	Teacher (phy. ed.)	Counselor	Counselor	Counselor	Counselor	married	married
3	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Teacher	Married (Graduate student in art)
4	Nurse	Nurse	Nurse	Pharmacist	Pharmacy	Undecided	Married (Interior decorator)
5	Uncertain	Teacher	Journalist	Uncertain	Uncertain	Uncertain	Graduate student (political science)
6	Social work	Uncertain	Teacher	Linguist	Teacher (elem.)	Uncertain	Administrative assistant (University education)
7	Geologist	Scientist (unspecified	Botanist	Geologist	Teacher (geography)	Teacher (geography)	Graduate student in biology
8	Scientist (unspecified	Uncertain	Psychologist	Uncertain	Uncertain	Teacher (history)	Married (employed in student personnel)
9	Medical Technologist	Nurse	Nurse	Nurse	Nurse	Nurse	Married
10	Undecided	Undecided	Teacher	Uncertain	Uncertain	Uncertain	Teacher of English
11	Mathematician	Chemist	Medical Technologist	Medical Research	Doctor	Doctor	Student, medical

12	Veterinarian	Veterinarian	Veterinarian	Veterinarian	Veterinarian	Veterinarian	Peace
13	Social Worker	Nurse	Pharmacist	Pharmacist	Medical Technology	Chemist	Married (Teacher of Science)
14	Teacher	Home Economist	Home Economist	Uncertain	Home	Teacher (commercial)	Teacher of music
15	Uncertain	Uncertain	Retailer	Teacher	Teacher	Teacher	Married (Teacher, elementary)
16	Interior Decorator	Uncertain	Translator	Teacher	Uncertain	Teacher	Married (Computer Technician)
17	Uncertain	Teacher	Teacher	Teacher	Uncertain	Teacher	Married
18	Librarian	Librarian	Librarian	Librarian	Librarian	Librarian	Married (Librarian)
19	Teacher (elem.)	Teacher (elem.)	Teacher (elem.)	Teacher (elem.)	Teacher (elem.)	Teacher (elem.)	Teacher (Elementary)
20	Nurse	Nurse	Medical Technologist	Medical Technologist	Uncertain	Zoologist	Married (Chemist)
21	Uncertain	Teacher	Uncertain	Home Economist	Home Economist	Teacher (home. ec.)	Married (Teacher of Home Econ[illegible]
22	Uncertain	Medical Doctor	Medical Doctor	Teacher (elem.)	Teacher (elem.)	Teacher (elem.)	Married (Teacher, Elementary)
23	Uncertain	Librarian	Librarian	Chemist	Chemist	Chemist	Married (Marketing)
24	Teacher (elem.)	Teacher	Teacher (languages)	Teacher (languages)	Teacher (languages)	Teacher (languages)	Editorial Assistant
25	Uncertain	Medical Doctor	Medical Doctor	Social Worker	Psychologist	Psychologist	Club Manager
26	Mathematician	Secretary	Nurse	Mathematician	Psychologist	Social Worker	Married (Social Worker)
27	Secretary	Uncertain	Teacher (mathematics	Teacher (mathematics	Teacher (mathematics	Teacher (English)	Married
28	Scientist (unspecified)	Professor	Chemist	Political Scientist	International Politics	Professor	Graduate student in Political Science
29	Teacher (unspecified)	Teacher (home ec.)	Teacher (home ec.)	Teacher (home ec.)	Teacher (home ec.)	Teacher (home ec.)	Married (undergraduate in Home Economics)
30	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Teacher	Married (librarian)

31	Scientist (unspecified)	Scientist (unspecified)	Scientist (unspecified)	Scientist (unspecified)	Uncertain	Uncertain	Married (Chemist
32	Commerce	Uncertain	Uncertain	Uncertain	Interpreter	Political Science	Married
33	Singer	Teacher (Elem.)	Uncertain	Teacher (Elem.)	Teacher (Elem.)	Teacher (Elem.)	Married (Teacher, Elementary)
34	Performer	Medical Technologist	Medical Technologist	Medical Technologist	Medical Technologist	Medical Technologist	Married (Medical
35	Nurse	Nurse	Nurse	Uncertain	Nurse	Nurse	Married (Nurse)
36	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Married	Married (Programmer)
37	Uncertain	Uncertain	Nurse	Nurse	Nurse	Teacher (unspecified)	Married (Teacher Elementary)
38	Uncertain	Uncertain	Psychologist	Occupational Therapist	Teacher (Elem.)	Teacher (Elem.)	Married (Teacher, Elementary)
39	Nurse	Nurse	Teacher (mathematics)	Teacher (mathematics	Medical Technologist	Medical Technologist	Married (Medical Technologist
40	Uncertain	Biologist	Biologist	Biologist	Uncertain	Journalist	Married
41	Uncertain	Teacher (Elem.)	Uncertain	Teacher (mathematics)	Teacher (mathematics)	Teacher (mathematics)	Teacher of Mathematics
42	Nurse	Nurse	Nurse	Nurse	Nurse	Nurse	Nurse
43	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Government	Married (Peace Corps)
44	Nurse	Nurse	Uncertain	Nurse	Nurse	Nurse	Married (Nurse)
45	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Geneticist	Married (editorial assistant)
46	Uncertain	Secretary	Uncertain	Teacher (Elem.)	Teacher (handicapped)	Teacher (Elem.)	Teacher (Elementary)
47	Teacher (English)	Teacher (Languages)	Teacher (Languages)	Secretary	Teacher (Languages)	Teacher (Languages)	Teacher of Language
48	Uncertain	Uncertain	Uncertain	Chemistry	Uncertain	Uncertain	Merchandiser

49	Teacher (Music)	Uncertain	Receptionist	Secretary	Secretary	Teacher (Elem.)	Married
50	Teacher (Elem.)	Occupational	Uncertain	T acher (Elem.)	Teacher (Elem.)	Speech Therapy	Married (Speech Therapist)

*If no statement of employment is given after married in last column the person is neither a student nor employed outside her home.

Among the 50 males who were in the same Laboratory group with these women (see Table D), there were four teachers; one librarian, 22 students in graduate and professional schools; seven in scientific, engineering, and military careers. The remainder were in journalism and various business and sales occupations, except for one who was a bartender. The variety of occupational fields among the men, if one counts those in graduate and professional schools, far exceeded that to be found among the women. Even among the gifted and talented women career horizons are still much more restricted than they are among men.

TABLE D

Career Preferences of Fifty Male Superior Students in High School and in First, Third, and Seventh Years after High School Graduation

Case Number	9th grade	10th grade	11th grade	12th grade	First year after high school	Second year after high school	Seventh year after high school
1	Electrician	Teacher (science)	Teacher (chemistry)	Engineer	Engineer	Engineer	Trainee in tax accounting
2	Doctor	Doctor	Doctor	Doctor	Doctor	Lawyer	Graduate student in English
3	Engineer	Uncertain	Engineer	Engineer	Engineer	Teacher (mathematics)	Teacher of mathematics
4	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Graduate student in Economics
5	Physicist	Doctor	Uncertain	Doctor	Doctor	Lawyer	*Law school student
6	Military	Military	Engineer	Teacher (physical ed.)	Teacher (phy. ed.)	Teacher (phy. ed.)	Physical Education teacher
7	Astronomer	Astronomer	Astronomer	Engineer	Engineer	Photograph	Military career
8	Mathematician	Mathematician	Military	Engineer	Physicist	Uncertain	Undergraduate mathematics and engineering physics
9	Engineer	Engineer	Engineer	Engineer	Engineer	Engineer	Engineer
10	Doctor	Doctor	Doctor	Doctor	Doctor	Doctor	Student medical school
11	Uncertain	Teacher (unspecified)	Teacher (history)	Lawyer	Uncertain	Lawyer	Teacher social studies

20	Geologist	Archeologist	Archeologist	Archeologist	Professor archeology	Professor archeology	Graduate student, medieval studies
21	Engineer	Engineer	Engineer	Uncertain	Uncertain	Business	Insurance underwriter
22	Engineer	Engineer	Engineer	Engineer	Engineer	Uncertain	*Student, engineer
23	Engineer	Engineer	Uncertain	Teacher (phy. ed.)	Teacher (phy. ed.)	Teacher (phy. ed.)	Teacher, physical education
24	Scientist (unspecified)	Engineer	Uncertain	Engineer	Lawyer	Lawyer	Graduate student, social studies education
25	Engineer	Engineer	Uncertain	Journalist	Journalist	Journalist	Journalist (reporter)
26	Uncertain	Business	Uncertain	Lawyer	Uncertain	Uncertain	*Broker
27	Uncertain	Scientist (unspecified)	Engineer	Physicist	Science (unspecified)	Doctor	Student, medical school
28	Engineer	Engineer	Engineer	Engineer	Engineer	Engineer	Engineer
29	Engineer	Mathematician	Engineer	Engineer	Engineer	Engineer	Bartender
30	Lawyer	Teacher (unspecified)	Engineer	Social worker	Social worker	Social worker	Graduate student, linguistics
31	Engineer	Engineer	Engineer	Scientist (unspecified)	Physicist	Physicist	Graduate student physics
32	Geologist	Conservationist	Geologist	Geologist	Geologist	Engineer	Engineer
33	Architect	Teacher (mathematics)	Architect	Minister	Teacher (English)	Teacher (English)	Teacher of English
34	Scientist (unspecified)	Uncertain	Geologist	Uncertain	Professor (physics)	Professor (physics)	*Graduate student, Asian studies

35	Music composer	Music composer	Music composer	Teacher	Professor	Professor	Graduate student, music
36	Engineer	Undecided	Engineer	Engineer	Engineer	Engineer	Engineer
37	Lawyer	Lawyer	Lawyer	Doctor	Author	Professor (English)	Graduate student, English
38	Uncertain	Uncertain	Engineer	Engineer	Engineer	Engineer	*Student engineer
39	Engineer	Uncertain	Scientist (unspecified)	Uncertain	Uncertain	Teacher (music)	Student, music
40	Dentist	Scientist (unspecified)	Engineer	Salesman	Uncertain	Engineer	*Salesman
41	Science (unspecified)	Radio announcer	Advertising	Uncertain	Professor (English)	Professor (English)	Graduate student, English
42	Uncertain	Scientist (unspecified)	Pharmacist	Uncertain	Biologist	Biologist	Graduate student, medical entymolor
43	Teacher (science)	Scientist (unspecified)	Scientist (unspecified)	Engineer	Engineer	Uncertain	Chemist
44	Engineer	Engineer	Uncertain	Business	Business	Actuary	Graduate student, actuarial science
45	Artist	Mechanical designer	Engineer	Engineer	Artist	Military	Military career
46	Psychiatrist	Psychiatrist	Psychiatrist	Psychiatrist	Doctor	Doctor	Student, medical school
47	Uncertain	Archeologist	Chemist	Foreign service	Uncertain	Professor (languages)	Graduate student, languages
48	Scientist (unspecified	Scientist (unspecified)	Biochemist	Physicist	Professor (philosophy)	Professor (philosophy)	Graduate student, physics

49	Scientist	Doctor	Doctor	Doctor	Doctor	Doctor	Student, medical school
50	Insurance & realtor	Engineer	Professor (engineering)	Professor (engineering)	Teacher (science)	Teacher (English)	Librarian

*Indicates students temporarily in military service but planning to continue career indicated on their return.

Career Development Needs

The purpose of the foregoing discussion has been to illustrate that multipotentiality, pressure of expectations, the significance of a career as a principal means of self expression, and long-training requirements of most careers gifted and talented individuals choose are all problemmatic factors in their career development. Conflicting desires, beliefs, and expectations related to the role of women in careers, although not peculiar to the gifted and talented, is almost universal among young women who have very high career potential. All these problems are essentially guidance problems. On the basis of them, certain guidance needs of gifted and talented youngsters can be specified.

Self discovery. It is likely that confusion resulting from multiple abilities and interests could be reduced by means of a more systematic approach to the problem of self discovery and the development of self understanding. Adequate guidance and counseling activities for the gifted should be regarded as a coherent program, rather than merely a set of services, which begins in early grades and continues throughout high school. Such a program should entail a series of coordinated steps, or graduated activities, aimed at stimulating the pupil to learn about himself beyond cognitive consideration of abilities and interests--to explore the more subjective personal dimensions which ought to be significant in career development.

We have seen on prior pages some examples of gifted students' thoughts regarding career and life goals. Study of many hundreds of such statements, and personal interviews with hundreds of such students, leads to the belief that gifted and talented youngsters usually attach very great subjective significance to careers. They need to learn to identify and develop attitudes, values, beliefs, priorities, and motives, and to understand how these factors combine into a philosophy of life, a set of intentions, a way of living. They need also to consider how their own characteristics and motives are shaped by other persons during their early years, and they need to learn how to assess the validity of the impact others have on them. As they grow, they need to progress systematically to consideration of themselves as separate persons and to identification and understanding of the impact they can have on others. Gifted and talented children are usually capable of thinking and communicating along such lines long before they are encouraged to do it. "My parents," said one ninth-grader, "are very strict. They have a lot of rules for me to follow, and to keep peace in the family I follow them. My teachers regard me as a fast learner and give me a lot of work to do. To keep up my image, I do it. Consequently none of these people, including me, really know who I am."

Another student, having been involved in a program designed to help students examine their own values (Sanborn and Niemiec, 1971) had this comment:

> *"In high school, life becomes a busy schedule of things to do and places to be. At least this is the way it seemed to me. This program was a. . . jolt that really caused me to think beyond the present. [It] forced me to. . . ask myself what is important in my life, and how I will achieve what I want. It was a stimulant to a routine-weary student."*

Independence. Development of personal independence is a general need of youth, but the timing of activities designed to promote independence may be different for gifted and talented youngsters than it is for the general school population. One way to promote independence is to systematically increase the amount of latitude students have to exercise control over the quality of their own educational experiences, and over the modes of learning undertaken. This kind of activity is important for several reasons, but in connection with the career development of the individual it is important mainly as an activity whereby they may experience the consequences of their own choice of goals and topics and their own style of implementation.

Oftentimes programs for gifted and talented students seem to result in fewer rather than more opportunities which promote independence. When the focus is too much on quantitative and not enough on qualitative adjustments for the gifted, the results can be counter productive insofar as development of independence is concerned. Perhaps the most precious commodity for use as a resource in development of independence is unstructured time. A few schools make use of it, but most do not.

Exploratory vocational experiences. Gifted and talented students do not place high value on pamphlets about occupations (Rothney and Sanborn, 1967). Although they may give some consideration to facts and figures given in the usual forms of vocational information, they usually need a more subjective conceptualization of a career than is likely to be available without direct exposure to the career field and to persons engaged in the field. Most guidelines for preparation and dissemination of occupational information stress objectivity so strongly that, if the guidelines are followed, little sense of feeling for a particular career comes through. One can usually demonstrate this defect for himself merely by looking up his own occupation in an occupational information center and determining how well the material available there reflects the most important qualities of the career.

Gifted and talented students, because of the personal significance they attach to careers, need to discover qualities which can best be obtained by direct contact with the career and direct association with people in the career. All the common methods of career information fall short of this need. "Words," the youngsters say, "but what is behind them?"

One way to get students to look at careers more realistically is to arrange tryout experiences in the particular fields of interest. A student who indicates an interest in teaching may spend a week with a teacher during which they share responsibility for classroom

activities. A student who says he is interested in forestry may be excused from school for a few days to follow a forester on the job. Give the student a chance to get a feeling about the work, the setting, the problems, and the associations possible there. Research by Holland (1964) leads to the hypothesis that the associations may be the primary factor of importance.

A worthy career resource person is seldom too far away. Even when the student resides in a small community with limited career resources, a little investigation will usually reveal an appropriate work setting some where within feasible distance. If the school is willing to allow time for such an experience, parents will often make the necessary arrangements for transportation and other details of a tryout experience.

Personal communications of professionals in a career field often have great meaning for gifted and talented students. At the University of Wisconsin professors, researchers, and administrators in virtually all areas requiring higher education have donated more than 3,000 hours for personal interviews with gifted youngsters who are curious about their fields. Sometimes they have evaluated the students' projects or performances in their areas of specialty. Architects, physicians, publishers, businessmen, and other career persons in the University area have also participated when no University staff member was appropriate. Young people who have participated in these interviews say that

the activity was one of the most worthwhile activities they experienced during high school.

Sometimes even long-distance communication is of value. Dave, a young man from a small northern Wisconsin community, perceived himself to be his own best company. He did not like social pressure or heavy social contact, and thought he would enjoy most a career which would permit him to remain a more or less solitary person. He was considering wildlife management as a career which might suit his preferences. At the urging of his counselor, he wrote to a long-time professional in the Colorado Department of Game, Fish and Parks, and inquired about the life of a wildlifer. He immediately received a post card reply indicating that the person he wrote to was too busy to reply at the moment, but would do so as soon as his busy schedule permitted. In a few weeks, Dave received the following letter:*

STATE OF COLORADO
Department of Game, Fish and Parks
Steamboat Springs, Colorado

5 December 1965

Dave
Shawano, Wisconsin

Dear Dave:

In checking my correspondence I find your letter asking about the duties of a wildlifer. I will try to answer your inquiries, describe some of the work we do, and touch on other phases of this varied vocation.

*Reproduced with permission of C.S. Hurd, Colorado Department of Game, Fish and Parks, now retired.

One uses many forms of transportation in this business. I travel afoot, on snow shoes and skis, in snow vehicles, airplanes, boats, cars and trucks, and on horseback to carry out my work. I have been an active person all my life, and the many days on end "pushing the pickup" bug me a little; but then during certain periods it seems that I spend day after day riding (horseback). There is much area to be covered. Through necessity some sections are visited only infrequently--though, to me, in the bailiwick to which I am assigned, the back country in its semi-primitive state is the most interesting.

The problems--real posers--the uninformed but generally well-intentioned public throws at you are indeed mentally challenging. One should cultivate as much of a sense of humor as possible. Public relations are the most important single phase of the work. Though a range ecologist or a biologist sometimes has little contact with the public, the wildlife conservation officer's contacts are constant--with people from all walks of life: those with selfish interests, the do-gooders, the self-appointed experts. These types may all be troublesome even to the extent of initiating projects which are detrimental to our resources and forcing them on the agency through political maneuvers.

The sincere people who want proper information--schools, service clubs, etc.--furnish the real hope and challenge, so in this area one should equip himself with as much knowledge of psychology, history and humanities as he can--along with the mathematics, zoology, botany, and limnology that are required. A little geology does help too, as one must develop insight into the interrelationships of all matters. If possible, have classes under the most able ecologists you can find.

Research is the key to furthering conservation practice. A state without a good research program is, in my opinion, never going to develop a decent conservation program. There are many surveys connected with our works. We must, or should, know wildlife populations and trends. Actual numbers, of course, may be impossible to get, and unnecessary since we can use sampling procedures to get good estimates.

A conservationist should be involved with legislation. Though sometimes we are muzzled by politicians, we should do what we can. Here is where we can get hurt, since the legislature controls the budget through appropriations. This happens in Colorado. Most of the monies come from license fees and are placed in the game and fish fund, but the money is doled out according to the whims of the legislature.

Colorado at present has a rural-dominated legislature which sometimes does not have a very wide view of overall conservation needs. This condition, of course, varies from state to state and from time to time within any particular state.

A new employee in Colorado will be assigned to different areas, with several transfers until he has a working knowledge of the many facets in game and fish and parks administration. There is no fixed routine for a new employee and the work is diversified. He is usually placed where there is the most need. Range studies, civil survey crew work and many "ranch jobs" are helpful to the beginning conservationist. The variety of jobs for specialists is great--as is indicated by the multiple-purpose nature of our work we need a good staff of able technicians to show us the way by providing answers to many specialized problems.

Here is a day in the life of a Wildlife Conservation Officer, taken from my own diary. (Note: different districts have their individual problems):

Late May. Start, 6:30 a.m. Check fishermen in Hahn's Peak Basin on small streams, beaver ponds, and Hahn's Peak Lake. Tabulate average size, number, and species of fish, and sample water from which they were harvested. Remove two beaver from where they dam irrigation ditch off Day Creek. Contact District Ranger (U.S. Forest Service) on cooperative recommendations we will submit at meeting of our land use agencies (Bureau of Land Management, U.S. Forest Service, U.S. Park Service, and our own Game, Fish and Parks personnel). Discuss information from hunter harvest, aerial trend counts, range utilization, and crop damage problems. Contact two Game, Fish and Parks license agencies and check out a non-resident who purchased a resident license. Check recreation area and see that required regulations are being observed. Sack lunch in field. Return about 8 in evening. Confer with two students who plan on careers in natural resource conservation. Read mail. Make notes for tomorrow's "side things" to check on.

Activities vary with the seasons and days. This past week I've assisted checking deer hunters in a neighboring district on a post-season hunt. One morning left from small airport here and flew to a ranch where there were haystacks unprotected with game fencing (which, if requested, will be delivered at the ranch by our department). Elk tracks going into these stacks were observed. Contact was made with over half a hundred elk raiding the hay crop. The pilot and I herded the game back some five miles into the woods and hills adjacent to the ranch. (That evening I called the person who was to erect the game fence. He said it would be done, but it hasn't been).

After driving away the elk, we continued our flight, noted game concentration and hazed four bands back in areas where they were getting near unprotected haystacks.

We returned to Steamboat Springs for lunch and sat in on a meeting of a recently-formed guides and outfitters association. When given an opportunity to speak, I pressed for cooperation in a needed post-season elk hunt. The association had been opposed to this, since it would reduce the number of game animals in the area.

After this meeting, I returned to my office (which I have in my home) to prepare a charge for a Boy Scout Council of Honor. I was the speaker of the evening and presented an Eagle Scout award to a fine young man.

So, you see, in just two days of a Wildlife Officer's duties, the activities are varied. Some are civic and some are professional. It is difficult to separate the civic from the professional--and this is the rule more than the exception.

Dave, the country's resources need so many dedicated young men. I can tell you this: You will not gain a lot of worldly goods following a wildlifer's career, but once in a while you will see a little gain in your opposition to the exploiters. Once in a while you will see a little improvement in the attitude (often lachadaisical) of the public. Once in a while you'll see an informed populace where there used to be an uninformed one. And you'll be working with the wonderful things of nature.

As for the engineering field--it is broad. If you would earn a degree as a civil engineer you could find outdoor work, a challenge to your mental capacity, a fair income, and you could escape the task of trying to bring understanding to a public for whom the problems and techniques of game management are almost totally foreign.

These are my personal observations and reactions to the work. This is as I see it. One of my sons who has a wide formal knowledge of wildlife and a degree in game management has decided to go back for a degree in engineering. I believe, knowing my son, that he is doing what he should, and he'll probably contribute as much in the future to perpetuation of the natural resources as will many professional conservationists.

The decision is yours, Dave. Decide which you want to do and give it all you've got. America has much to offer--and much to receive. I hope this letter may be of some worth to you.

Sincerely,

C.A. Hurd

On the strength of this information from a real professional in the field, Dave selected another career. The kind of information given in the letter hardly meets the standards of objectivity usually met by occupational briefs, but nevertheless it was the kind of information Dave needed to know before he invested himself in training for a wild-lifer's career.

When contacts of the type described above are being arranged for girls, special attempts should be made to locate professional women who can talk from the viewpoint and experience of a woman in the field.

Possibly a very satisfactory form of career exploration could be achieved by schools through cooperative work-study programs. Such programs have already been implemented in many schools, but usually they are not instigated with gifted and talented youngsters as the target population.

Summer programs such as those sponsored by the National Science Foundation give some students an opportunity to work closely with professionals in a career field of interest over a period of several weeks.

Also they are able to associate with other outstanding young persons whose interests are similar to theirs, and to discover better than they can in school how they react to a concentrated schedule of daily work in a single field. Unfortunately these opportunities exist for only a small fraction of those who would benefit from them; they are too expensive for many who need them; and the breadth of different career areas offered is restricted. Were more such opportunities offered in a wider variety of fields at less cost, career exploration needs of gifted and talented students could better be met.

Finally, there is the need for more summer and part-time work opportunities whereby gifted youngsters can get experience relevant to career fields. Peterson (1968) has shown that the kinds of work open to young people has little or no effect on their career choices. One learns very little of interest for the problem of career selection by washing dishes, mowing lawns, waiting tables, hopping cars, or busing dirty dishes. At best, one learns what one does not want to continue doing indefinitely. But seldom do young people find work with better career exploration potential. They rarely get into law offices. medical clinics, newspaper work (except, of course, the circulation department) business management, investments, research agencies, and other settings where career exploration could be accomplished.

In exceptional instances where gifted young people have been employed to do "a man's work," employers have sometimes discovered

how seriously they underestimated the capabilities a "teenager" can bring to the job. In one community the sports reporter for the weekly newspaper died unexpectedly. The high school journalism teacher persuaded the editor to try a talented young boy who was covering sports for the school paper. The editor condescended to let the boy turn in a few stories during the time it took to replace the deceased sports-writer. As it turned out, the editor did not find it necessary to hire a replacement at all--until two years later when the high schooler graduated and left town. In another instance an animal breeder hired a gifted high schooler to do odd jobs around his chinchilla farm. The boy suggested so many ingenious ideas for mechanizing, streamlining, and economizing on the operation that his employer offered to help pay for his college education and promised him a permanent position after graduation.

It is doubtful that schools can do much about the poor employment opportunities for gifted youngsters. If improvements could be made, however, both employers and the gifted would probably benefit.

Time. For young people who choose long-training careers, the investment of time in preparation for entry into the career is heavy. Any reasonable adjustment which serves to eliminate time waste is worth consideration. Many educators are skeptical about reducing the amount of time required for completion of an educational program, but followup

evidence has shown that if such adjustments are made on the basis of sound consideration of the individual student's abilities and needs, the results are nearly always satisfactory.

One way to save time is to accelerate. If the educational experiences and interpersonal associations a young person needs are to be found at some educational level above the one in which he or she would be normally placed, then acceleration is in order. There are several ways which acceleration can be accomplished, and there are some points in a students life which are better than others for accomplishing it. For the purposes considered here, acceleration during secondary school years is sometimes worthwhile.

Brahe (1967) and Kovan (1966) completed followup studies on 63 gifted students who left high school after grade 10 or grade 11 and entered colleges. The findings overwhelmingly supported the practice of acceleration when it is done on the basis of individual considerations. Accelerates were compared to a matched group of students who completed high school in normal fashion. The accelerates were superior in academic achievement and in awards and honors received, although both groups established very good scholastic records. Activity participation and expressed social satisfaction were comparable between the two groups. The time advantage gained is illustrated by the following two cases, both of whom were women undertaking long-training careers:

Priscilla, who attended a high school of 750, had exhausted the school offerings including some independent study in physics at the end of her junior year and, at the same time, she had carried a full program of extracurricular activities and read widely. In her first year at the University under the early admission plan she achieved a 3.48 grade-point average and the local school awarded her the high school diploma. At the time of graduation from the University she wrote, "I'm very glad that I came to college a year early. It had no ill effects and I now feel much happier about the prospect of four years ahead." Six years after leaving high school at the age of 23 Priscilla married a fellow medical student and they entered the third year of medical school together.

Sueann entered the state university after three years of high school, compiled an impressive record in academics and service to the university community, spent her junior year abroad, graduated with honors and, at the age of 24 will receive her Ph.D. in psychology from a leading university. During her college career she has indicated that being a year younger than most of her classmates has not bothered her. "No one ever asks me how old I am and I can't see why it makes any difference."

The small high school (enrollment about 250) which Sueann attended provided few facilities and no advanced courses. She had read "all the books in the library" and all that her parents could provide. She took three correspondence courses from the state university in subjects not offered in her high school and she carried on numerous projects designed to enrich the work in her classes. She participated in forensics, library club, church choir, student councils, and organized a community Young Democrats Club. Her activities included hikes and staying overnight at her friends' homes. As a high school freshman she estimated that she was "one of five or six most popular" girls in her school.

Sueann's aspirations for high achievement were modeled after the very successful performances of her father and grandfather who held high positions in government. Her

mother encouraged her to set and to reach her own goals but both parents encouraged her to do whatever she undertook at a high level. They recognized that the school was not providing sufficient challenge for her very superior mind and, with encouragement from the school counselor and some of her teachers, gave serious consideration to early graduation.

When the parents discussed Sueann's acceleration with school officials they were reluctant to approve it lest it set a dangerous precedent. After much consideration of the general principles involved and study of Sueann's performances the Board of Education approved the following statement of general policy on acceleration.

POLICY STATEMENT

Acceleration of Superior Students at _____ High School

1. The faculty and Board members of _____ High School, wishing to acknowledge the superior intellect of certain and rare students and in the interest of best serving the intellectual development of these students hereby sets forth these policies regarding acceleration of superior students.

2. Requirements for graduation - 16 academic credits.
Maximum subjects to be taken by all students

Grade 9	4
Grade 10	5
Grade 11	5
Grade 12	5

Extra subjects required to make up minimum credit requirements to be taken from an approved university correspondence course approved by Principal and Superintendent. Cost of fee, and books, and supplies to be paid by the parents. Upon satisfactory completion of the course the District will reimburse student and parent for fees only (not books or supplies). If student fails to complete course with a passing grade there will be no reimbursement.

3. That acceleration, within the above 16 academic credits, be considered by Superintendent upon presentation of written recommendations of the High School Principal or of teachers (approved by the Principal), such recommendations to include consideration and statement of the student's grades, IQ scores, achievement test scores, drive of the student, health and physical development of the student, age, whether or not the fourth year of high school would academically challenge the student and, finally, the wishes of the parent.

4. Since students in accelerated program will not have attended high school for the full four-year period, and since they will not have been graded by local teachers in all subjects which make up their 16 academic credits for graduation (subjects taken by correspondence will have been graded by teachers of the institution from which taken) it is determined that, in fairness to regular four-year seniors, accelerated students will NOT be considered for valedictorian or salutatorian honors of the class with which they graduate.

5. In all cases the initial process toward acceleration must come from the student and the parent.

Approved by Board of Education, June 6, 19 ___

District Superintendent of Schools

Both women in the above examples were able to get virtually all career entry requirements completed by the time they were 25 years of age. One young man, when asked what advantages he had experienced as an accelerate, answered: "Whatever advantages accrue as the result of having two extra years of adult life."

Another form of acceleration which has proven successful with high school is to allow students who are highly developed in specific areas to take some work at college, for college credit, while they are still in high school (Hogan, 1966). Students receive high school credit for completed college work, and they get deferred college credit which is counted toward college degree requirements when the student enrolls.

By these and other acceleration programs, the time investment of bright students with long-training career goals can be reduced.

Operational Suggestions for General Use

Hopefully, the contents of this chapter have, up to this point, adequately conveyed a set of practical suggestions for helping gifted and talented students meet their career development needs. Suggestions, so far, have been largely limited to research and results from practice growing out of the Research and Guidance Laboratory for Superior Students, University of Wisconsin. Additional observations and suggestions regarding career development programs for gifted and talented persons were plentiful during the seminars leading to production of this book. Here, an attempt will be made to summarize some of the suggestions made by seminar members. Hopefully, this may serve as an appropriate way in which to conclude this chapter.

Almost without exception, the suggestions included here represent the personal value systems of one or more seminar members. Because this

is so, readers are urged to study and reflect on Chapters VI and VII of this book as they think about the suggestions presented here.

It is suggested that conscientious attempts be made to encourage gifted and talented persons to make occupational decisions. It appears that the obvious multipotentiality of gifted and talented persons has, in many instances, encouraged such persons, and those who work with them in the area of career development, to over-emphasize the fact that they are capable of attaining marked success in a rather wide variety of occupations. They are encouraged to "take your time" in making occupational decisions. As one seminar member put it, the gifted and talented are in danger of "starving at the occupational smorgasboard because they can't decide which choices they want to make".

In addition to this caution often given to gifted and talented persons, many appear to be slower in making occupational decisions because of the intrinsic rewards associated with going to school. That is, for those who know they are, for all practical purposes, almost guaranteed "success" so long as they limit their competition to the academic arena, it is very tempting to delay leaving the world of formal education in order to compete in the general occupational society where factors in addition to their giftedness may significantly influence their success in competing with others.

In this sense, the gifted may be prime candidates for accepting the false assumption that the purpose of education is simply to prepare one for more education. To do so may, for many, effectively limit occupational choices to those available on a college or university campus -- and, almost certainly, most gifted persons are too bright to make that kind of occupational decision!

It is suggested that the gifted and talented have the same responsibilities -- no more, no less -- for using their talents in the occupational

society as do all other persons. One's gifts and talents should neither "sentence" him or her to a particular spot in the occupational society nor "excuse" him or her from participation in that society. The extreme sense of obligation for using one's gifts in the occupational society, as voiced in the student remarks reported earlier in this chapter, seem particularly unfortunate. While most will probably choose to use their gifts and talents in their "careers" (as defined in Chapter I), many may prefer not to make maximal use of the gifts in the "occupations" in which they engage. One seminar member suggested that, among gifted and talented persons, many may regard "earning a living" as a "necessity box" to be pursued only when the need to do so cannot be avoided. At the same time, they may consider their "work" (as defined in Chapter I) as something that brings great meaning to their lives.

In our opinion, it would be most unfortunate were career development programs for gifted and talented persons to be supported primarily because of the potential such persons have for making contributions in the occupational society. They are almost certain to make substantial contributions to the total society, but it is important to remember that the occupational society is only a part of that total society.

It is suggested that the gifted and talented may be more adaptable in their career development than are other persons. Several seminar members voiced the thought that gifted persons may very well create, rather than "develop", their careers. Many will, in effect, not choose occupations from among those that now exist. Instead, they will be likely to be among those who invent new occupations. The entrepreneurial potential of gifted and talented persons would also appear to be a factor here. As one seminar member observed, "It seems highly unlikely that a gifted person seeking a job will remain unemployed for very long". Certainly, the gifted

person who changes occupational choices while in the elementary or secondary school will not have suffered greatly from having made inappropriate educational decisions. Similarly, the gifted person may very well be more able than others to effectively change occupational choices even after completing an undergraduate degree. The extremely long period of educational preparation, noted earlier in this chapter, demanded for most gifted persons to make maximal use of their giftedness also offers multiple opportunities for changing occupational choices along the way.

It is suggested that, in considering career development programs for gifted and talented persons, the concept of "giftedness" be viewed as directly related to "excellence". Great disagreement existed among seminar members on this point -- and even greater controversy should arise among those who choose to read these words! However, it should be pointed out that this suggestion does not appear inconsistent with the categories of "giftedness" reported in Chapter IV and used by the United States Office of Education. The essential argument in favor of this suggestion can be found by reading Chapter IX of this book. In effect, it says that, in an occupational sense, it seems fully as logical to think of a "gifted" or "talented" auto mechanic as it does to think of a "gifted" or "talented" artist or musician. In either case, "giftedness" is operationally defined, in the occupational society, by the demonstrated ability to perform in ways obviously much superior to ways in which others are able to perform. Counselors, and others who are responsible for working in career development programs for "gifted and talented" persons should, it seems to some of us, be able to do so thinking about many more parts of the occupational society than simply those requiring college degrees for entry.

It is suggested that very great need exists to assist gifted and talented persons who are disadvantaged, in a socioeconomic and/or cultural sense, in career development. Much seminar time was spent in observing

that, surely, gifted and talented persons must exist among the disadvantaged in sizeable numbers. Yet, the difficulties in identifying the gifted and talented from within the population of the disadvantaged are very great as noted in Chapter IV. Seminar members who are working with gifted and talented disadvantaged persons pointed out that it would be the "kiss of death" for them to advertise their programs as ones for gifted and talented persons. They seemed to feel that, were they to do so, members of the disadvantaged community -- both parents and children -- would reject the program. Instead, they seemed to express a belief that their programs gain greater acceptability if they are advertised as concerned with "talent development" for all persons who are interested in trying to do so. The sociological, economic, and psychological handicaps acting to prevent gifted and talented disadvantaged persons from fully developing their gifts and talents appear to be great. Career development efforts aimed at helping such persons must surely devote major attention to ways in which such handicaps can be overcome.

It is suggested that very special efforts be made in career education programs to facilitate career development of disadvantaged adults and women seeking to re-enter the labor force. These are persons who, in many instances, have demonstrated that they are, indeed, gifted or talented individuals but who, for one reason or another, have never found an opportunity to fully develop and utilize the gifts and talents they possess. They represent, in a very real sense, clear evidence of the past failures of our educational system to adequately meet the career development and career education needs of gifted and talented persons. Implementation of this suggestion obviously calls for a comprehensive career education program that extends considerably beyond the resources -- both physical and per-

sonnel -- of the public school system. It very likely will involve contributions by persons from higher education, from the business-labor-industry community, and from a wide variety of other human service organizations and agencies in the community. Since the use of such a wide variety of resources is perfectly consistent with the philosophy of career education itself, there should be no hesitancy in trying to incorporate this emphasis as part of career education's total effort to meet the career development needs of gifted and talented persons. We cannot continue to think about the "gifted and talented" as though they are composed almost entirely of youth.

It is suggested that effective career development programs for gifted and talented youth must extend considerably beyond the four walls of the school. It has been pointed out earlier in this chapter that the use of "one-on-one" contacts between gifted youth and gifted individuals in various occupations has been particularly helpful in terms of "life style" questions asked by the gifted and talented. One seminar member observed that the only good way to discover if a youth has talent in music is to put him in contact with a gifted musician. It appears highly unlikely that the degree of challenge needed by gifted and talented persons, in almost any area of their lives, is to be found within the confines of an elementary or secondary school building. This certainly appears to be true if one speaks about career development problems of such youth. The increased flexibility and use of community resources envisioned by the career education movement appears particularly appropriate and timely in the case of gifted and talented persons. It should be fully utilized.

Concluding Remarks

This chapter has attempted to deal with career development problems faced by gifted and talented persons in career development. Its primary contributions are hopefully found in the description of ways in which the Guidance Laboratory for Superior Students, University of Wisconsin, has worked in helping gifted and talented persons solve their problems. Other examples of effective programs of career education in general, and career development in particular, are reported in Chapter VIII. It is hoped that the contents of this chapter may stimulate readers to study the contents of that chapter very carefully.

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Section C: Value Considerations in Career Education for Gifted and Talented Students

Chapter VI -- Basic Value Issues in Career Education for the Gifted and Talented

Chapter VII -- Supplemental Value Considerations in Career Education for Gifted and Talented Persons

BASIC VALUE ISSUES IN CAREER EDUCATION FOR THE GIFTED AND TALENTED

Values and Educational Decisions

Every decision that human beings make expresses some value commitment, be it consciously entertained or tacitly assumed. This is no more than to recognize that choices are guided by ends in view and that deliberate action is directed toward the fulfillment of purposes. The activities of education, in particular, have this value-laden character. All deliberate provisions for learning are a consequence of electing among alternatives the ones that are deemed of most worth. Conflicts in educational policy are reflections of differences in what people regard as most important. Curricula, standards of school admission and promotion, evaluation procedures, administrative practices, teaching methods--all bear witness to the values of the society in which the education takes place.

It follows that whenever people seek to frame new educational policy or to improve existing educational practices, they need to reflect on the values they wish to serve. Without such reflection it is easy to fall prey to the pressures of expediency, to sink into mindless routine, or to engage in capricious innovation. The clarity and consistency of a people's educational commitments evidently require conscious awareness of the values they seek to realize.

The concern for career education is an attempt to do justice to certain personal and societal values. Similarly, interest in the exercise and development of special gifts and talents through career education reflects particular value preferences and emphases. Moreover, the purposes expressed in career

education and in distinguishing special abilities for development do not operate in isolation but must be coordinated with other aims within the total array of human goals. It is important, then, in embarking upon the present exploration of the problem of career education for the gifted and talented to try to articulate some of the basic value issues that are at stake in the making of policies and programs in this domain.

Types of Value Issues

In the following analysis several different types of value issues will be considered. The first three are essentially questions of semantics: What is the meaning of career? What is the meaning of education? What is the meaning of gifted and talented? The issue in each case will be posed by setting up a pair of contrasts: for the first question, the contrast of life and job; for the second, the contrast of experience and schooling; and for the third, the contrast of person and function.

The next type of issue concerns the nature of the human condition and of the activities that best serve the realization of human ends. For this concern the issue will be set in terms of the contrast between work and play.

A third type of issue relates to the problem of time, in that all human affairs are conducted within a context of relative transitoriness and mutability yet with concern for order and stability. Here the value issue will be treated in the light of the contrast between change and permanence.

A fourth set, containing three issues, relates to fundamental social values. Each issue in this set is one dimension of the basic social problem of reconciling the competing claims of equality and difference and of unity and plurality. The first issue will be set in terms of the contrast between the generalist and specialist, the second in terms of the contrast of hierarchy and leveling, and the third in terms of the contrast of the person and the collective.

In all, then, eight basic issues will be analyzed: three of meaning, one of the human condition, one of time, and three of society. All of the issues are open, in the sense that there is no single demonstrable "right" answer to the questions. This is only to affirm that they are genuine value issues, about which a free choice must be made, and about which persons of goodwill and intelligence have differed and will probably continue to differ. Even though the issues are open in this sense, it does not follow that the choices made on them are arbitrary or inconsequential. On the contrary, it is important to reflect attentively on the issues and to engage in continuing dialogue on them with others of kindred and conflicting convictions, both because of the clarification and amelioration of choices effected through such activity and because the quality of personal and corporate life depends on the choices made.

In sum, the purpose of setting forth these issues is to provide an array of contrasting concepts in terms of which policies and programs of career education for the gifted and talented may be appraised in the light of their contribution to chosen personal and social values.

In using these pairs of contrasting concepts it is well to remark that they are not to be interpreted as dichotomous alternatives, such that one must choose one to the exclusion of the other. Rather, they point to axes of choice, with possibilities of any number of intermediate positions. Since each pole of a contrasting pair has certain evident strengths, the policy maker will naturally try to do justice to both through appropriate integration of components. The contrasting values serve in much the same way as contrasts of line, mass, color, light, and shade in a work of art; namely, as complementary elements within a complete integrated construction. In the activity of making policy decisions, then, the analysis of basic value issues serves to mark out some of the dimen-

sions of relative preference along a continuum running between extremes, so as to produce what is regarded as the maximum total realization of benefits.

1. The Meaning of Career: Life and Job

It might seem at first thought that the semantic question is not a value issue, since the meanings assigned to words are arbitarary and modifiable for whatever needs they are meant to serve. On further thought, it is clear that words carry a freight of commonly recognized connotations which may have strong value tone. It follows that the assignment of meanings to terms that are used to articulate policy concerning practice is not neutral with respect to values. Assigning any particular meaning to the term career for the statement of policy about career education will automatically attach certain values to such activity, and these will be different from the values that would be attached to some other assigned meaning.

When people argue about the meanings of terms, they are generally not disputing about matters of fact; that is, about the statistical data on average usage. They are usually concerned with advocating a particular set of values. In this context, definitions of terms are prescriptions, not descriptions, and what is prescribed depends upon certain purposes one is interested in promoting. In short, issues about the prescribed meaning of terms are value issues.

For what are those who propose career education prescribing? What is the semantic content of the term career? It is fruitless to try to settle the question by any empirical data, for it is not a question of fact. There is no one correct definition of career. A range of different meanings is available, and it is well that this is the case, for the variety of definitions makes it possible for the same term to be used for programs that serve quite diverse ends. Keeping open the semantic question thus enriches the world of value possibilities symbolized by the language employed.

The fundamental value issue inherent in the question of the meaning of the concept career can be stated in terms of the pair of contrasting ideas of career as life and career as job. The one extreme is the broad orientation according to which a person's career is defined as the totality of the events that comprise his life. Career education under this definition is synonymous with education: Education is designed to enable a person to live his life most effectively, so that if career is the course of life, education for career is nothing more nor less than preparation for life itself.

The other semantic extreme is the narrow definition of career as job, in the common sense of what a person does to make his living through his occupation. Under this narrow meaning career education is preparation for the job. It is only a part, and for some perhaps a relatively small part, of the total content of education.

The same contrast of extremes holds for an alternative and related concept; namely, that of vocation. Usually the concept of vocational education refers to training for a job, which is generally assumed to be in the crafts or trades and not in the managerial, professional, or artistic categories. On the other hand, the idea of vocation growing out of the religious tradition refers to a person's total life calling, of which earning a livelihood is only one aspect. Moreover, by a curious inversion of reference, this broader concept of vocation tends to be associated with the more prestigious occupations such as those of the clergyman, the physician, the teacher, or the statesman. Because of these customary occupational correlates of the two concepts of vocation, the narrower type of vocational education has generally been ranked lower in the value scale than education for vocation in the sense of a calling. Presumably people are "called" to higher things, while they are driven by habit or necessity to labor

for their livelihood in some common occupation. There are exceptions to this rule, such as the case of the saintly Brother Lawrence, who saw his highest spiritual calling as faithful service to his fellows through humble tasks in the kitchen. But even here it is noteworthy that his calling was fulfilled not so much by his manual labors as by the literary testament of those labors that he left for the spiritual delectation of posterity.

The classical case of vocation and of vocational education is important for policy makers in the newer movement of career education because it is not uncommonly believed that career education is simply a new name for the old vocational education, which for a variety of historical reasons has come to occupy a place on the educational prestige ladder considerably below liberal education and professional education. Semantics often has profound political dimensions, which deeply affect the chances for success of proposed programs. The fate of career education may largely depend on the care and skill with which an attractive meaning of career is established and on the success with which an automatic identification with traditional conceptions of vocational education is avoided.

In the politics of semantics the use of the term career has evident advantages over vocation. Its value connotations in common parlance are positive. Career communicates the image of serious, long-term endeavor of a relatively high order, as in the phrase, career diplomat. The decision to remain in military service beyond the obligated period is given added luster and dignity by describing it as choosing a military career. The term career regularly symbolizes something of considerable importance about a person's life style and the kind of role he plays in the social scene. It is one of the fundamental designators of personal character, since one's nature is indicated by his choice of career and since his destiny is to a considerable degree molded by pursuing it.

Despite such common connotations of career, there is still room for a considerable diversity of meanings, ranging from the very broad to the very narrow, each importing certain values for career education. When the broad meaning is chosen, identifying career with life, career education is made all-encompassing and all-important in teaching and learning. It might be objected, then, that the concept loses any significance, since it simply refers to education as such, to which the addition of the qualifier career contributes nothing. This objection can be answered by the argument that career symbolizes a particular conception of life as planned, purposeful, serious, and useful, and correspondingly that career education is education for a total life conceived in that fashion. It is quite possible to conceive of styles of life that are not of that kind, for example, those that are more episodic, or more determined by force of circumstance than by choice, or are oriented to pleasure rather than utility. Education for such modes of life would be different from career education.

The broad definition of career manifestly gives great weight to career education. The career educator is one who holds a particular philosophy of life--that of life as a career--and a particular philosophy of education--that of educating for life as a career. He takes his place among proponents of various views of education and argues his case for a global conception governed by the idea and the ideals of a person's life being expressed and fulfilled in his career. On the other hand, the broad definition has the drawback that it lacks the specificity needed to make sharp and clear decisions. Also, from the strategic standpoint it may be difficult to convince other educators that insofar as they are concerned about the life patterns of the learner they are really engaged in career education, or ought to be.

The narrow definition of career as job meets these difficulties. There are relatively clear procedures for identifying types of gainful employment and for preparing people to undertake them. Moreover, since these educational tasks demand only a portion of the whole educational effort, the career educator can pursue his interest without encroaching too seriously on the domains of others. The major defect of the narrow definition is that it tends to become downgraded and trivialized, just as occurred with vocational education. A job tends to become identified with the less highly esteemed occupations, and education for a job is depreciated in comparison with other forms of education.

In an effort to maximize the advantages and minimize the difficulties of both extreme definitions, an intermediate position can be taken, such as that in which career is defined in terms of work. The term work is less broad than life, since there are aspects of life other than work--play, for example. On the other hand, work has a broader connotation than job, since there are kinds of work that are not part of one's gainful employment, as, for example, the activities of a volunteer worker. Furthermore, the idea of work appears to be immune to downgrading, for it is just as appropriate to speak of the work of a scientist or artist as that of a street cleaner, while one would normally refer only in a figurative sense to the scientist's or artist's job.

To be sure, the concept of work is itself in need of definition, and there are broader and narrower connotations for it, too. Nevertheless, the term seems to possess a range of intermediate meanings that make it a practical basis for defining career education. If, for example, work is taken to mean a connected series of activities undertaken for some end regarded as socially useful, career education may be conceived as preparation for work, yielding a definition that is broad enough to cover important domains of human activity

yet limited enough to allow for other types of education and to permit some measure of discrimination among the possible objectives of teaching and learning as career-related or not.

With regard to career education for the gifted and talented (however such persons may be defined and identified), it is to be noted that the semantic issue may have a somewhat different color from that in the case of career education generally. Suffice it to suggest that the more ability persons have the broader and more varied may need to be the meanings assigned to the term career. Just as the narrow stereotype of vocational education, marking off a particular group with limited goals, needs to be replaced by a term such as career education to allow for a wide variety of types of work for persons with a large range of occupational objectives, so it can be argued that the extraordinary capacities of the gifted and talented require a particularly generous and flexible conception of the work activities which constitute such persons' careers. To make this point is not to settle the semantic issue, but only to indicate that any decision on how career education generally is to be defined will not necessarily serve as well for the particular case of career education for the gifted and talented, for whom a somewhat different decision may be in order.

2. The Meaning of Education: Experience and Schooling

A semantic issue somewhat parallel to the foregoing concerns the meaning of the term education. Again, there is no one correct meaning of the term. The definition adopted will express certain values and interests to be served by it. As in the previous case, the possible connotations range from narrow to wide, with corresponding advantages and disadvantages with respect to importance and precision of reference.

With a broad definition education may be conceived as a person's total experience. According to this view, everything that one encounters teaches

something; whatever one can do and whatever he knows is a consequence of his life experiences. Schools and other agencies of formal instruction, such as the training arms of corporations or the military, are not the only resources of teaching and, indeed, may be of considerably less import for human development than a variety of informal agencies such as the family and the peer group.

On the other extreme is the narrow definition of education that limits it to formal instruction in schools. By such a definition, although obviously a person learns many things apart from the planned curriculum of studies, the process of acquiring such learnings is excluded by definition from the sphere of education. The narrow definition has the advantage of concentrating attention on a limited range of clearly marked out and professionally controllable activities in one type of social institution especially created and maintained for instructional purposes. It has the disadvantage that by its restricted purview it may obscure the relation of what schools do to the larger concerns of life and that it may draw attention away from the many vital resources for learning that are available beyond the formal institutional curriculum.

The scope of the term education is of particular moment in establishing policy for career education. In principle, the definitions adopted for career and for education, respectively, are independent of one another. Thus, if career were defined as one's total life pattern, education could be defined as all of the experiences that prepared the person for his kind of life, or alternatevely as the formal school curriculum that contributed to it. If, on the other hand, career were taken in the narrow sense of job, the term education could be used either in the broad sense of all the experiences that prepared one for this gainful occupation or in the narrow sense of school instruction for the job. In practice, it is reasonable to expect a certain concordance between the definitions of the two terms. If one takes a broad view of career,

it is not unlikely that a broad definition of education would be preferred, and vice versa, on the grounds that the broader the range of competencies for which the learner is to be prepared the wider is likely to be the spectrum of agencies and processes called upon to facilitate the desired learnings.

In any event, the concern for career has the tendency to stretch the concept of education beyond the narrow confines of the school, since the educator is led to think of what he teaches in relation to what the student will do, over the long term, outside of school. Under these circumstances the effect of influences beyond those of the formal curriculum will naturally be taken into account, and it would be surprising if the sensitive educator did not seek to make use of opportunities for supplementing school learnings by such experiences as apprenticeship and field service activities.

As in the case of the term career, the values of the extreme meanings of the term education are normally combined in a term with intermediate connotation. Education as life may be regarded as too vague and diffuse a concept to guide practice, and education as schooling as too restrictive. A reasonable compromise definition might include within the scope of education all of the deliberate, systematic provisions made, through all social agencies, including schools, families, religious bodies, libraries, museums, business organizations, government, and the press, to promote the growth of persons in knowledge and skill. Such a definition excludes from the scope of education a great variety of incidental and adventitious learnings which are not within the purview of deliberate policy decision, but it is broad enough to include a wide range of interconnected activities about which thoughtful systematic choices may be exercised.

With an intermediate definition of this sort, career education would mean that part of the systematic provisions made through any and all of the relevant

institutions, for the promotion of the competencies required for careers. Using an intermediate definition of career as referring to the life of work, career education would be defined as deliberate, systematic instruction in the knowledge and skill needed for work, effected through all of the social agencies that are able to provide such preparation.

The definition adopted for education is a particularly sensitive matter in the case of the gifted and talented. Since persons with unusual abilities may require unusual types of learning provisions, the scope of what is normally taken as education may require modification as compared with education for people generally. A narrow concept of education as schooling, for example, may be especially limiting for persons who could profit more than the average from special directed learning opportunities outside of school. Again, it may be found particularly important that the definition of education for the gifted and talented make generous provision for self-directed learning.

It may turn out that the definition of education chosen will be no different for the gifted and talented than for any other persons. Nevertheless, the value issues at stake in electing the meaning of the term may vary according to the characteristics of the group to be covered by the term. It is accordingly wise not to adopt a definition devised for other purposes, but to reconsider the meaning to be employed within the context of the particular population that is the subject of the policy being formulated.

3. The Meaning of Gifted and Talented: Person and Function

The third semantic value issue in career education for the gifted and talented concerns the meaning to be assigned to the terms gifted and talented. A preliminary question may be raised about the use of the two terms instead of one. Are gifted and talented to be regarded as synonymous? If not, what is the difference? If so, why use both? It seems clear that from a purely

logical point of view one term would suffice. By common usage a gifted person is said to have talent, and a talented person is said to be unusually endowed with certain gifts. Accordingly, with the usual connotations, gifted and talented may be used interchangeably. The use of both terms is in part a consequence of historical factors in the development of education for persons of exceptional ability. Initially the term gifted was applied to persons scoring above a certain level on tests of intellectual aptitude. Later it was recognized that such a measure failed in many cases to reveal extraordinary abilities of another kind than the types of intelligence disclosed by the I.Q. tests--as, for example, artistic creativity and musical precocity. It therefore seemed reasonable to distinguish the latter types of unusual ability by the different term talented. The use of the dual term gifted and talented is a reminder of this historical situation and a means of signaling the intention to refer to a wide range of types of ability in considering the education of persons with exceptional aptitudes.

The value-laden character of the semantic issue is even more patent for the terms gifted and talented than for the terms career and education. Gifts and talents, by any acceptable definition, are things prized. Clearly, then, what is considered a gift or a talent depends on a system of values. What merits such a designation varies with the preferences and priorities of a given culture. Those who make educational policy for the gifted and talented need to be aware that their way of defining who falls within this category expresses certain cultural convictions about what is valuable and that other cultural values would require other definitions of what count as gifts and talents. For example, in an industrial civilization verbal and mathematical abstractive ability count as gifts more thanthe physical prowess that would mark the gifted in a culture of hunters and fishers. Again, in a socialist society the capacity

for cooperation may be a more important measure of worth than either manual dexterity or cleverness with symbols. And all of the foregoing would be less a proof of talent in a spiritual community than, for example, moral elevation or the capacity for ecstatic experience.

The fundamental decision in defining the terms gifted and talented is that of identifying what is to be counted as valuable within the cultural context where the education of the persons so designated takes place. To the degree and in the ways that there are conflicts and uncertainties about basic values in the culture, the semantic issue regarding the gifted and talented will be joined, and no thoughtful definitional choice can be made apart from a consideration of the basic values which the society wishes to serve through the education of these persons. Policy makers are well advised not to suppose that there is a single commonsense meaning of gifted and talented that can be assumed without question. Rather, they may gain much in clarity and conviction by stating explicitly the values being served by the definitions adopted.

The value-ladenness of the terms gifted and talented is evident in the political hazards to which those who use them expose themselves. While the use of the term career education may serve the political end of lending dignity to activities unduly downgraded by too narrow a concept of vocational education, the addition of the qualifier "for the gifted and talented" may raise resistance from large segments of the society who associate those terms with special privilege and snobbery. Such negative reactions at least raise the question as to the political wisdom of using the designation gifted and talented for any program, however well intentioned, that one wishes to have accepted and supported by the general public. If the terms are used, the wide acceptance of policies formulated on the basis of them depends on a careful articulation of connotations that will not clash with the value priorities of those who must give their consent and support.

Like the terms career and education, the terms gifted and talented may be defined with a range of connotations from broad to narrow. On the one extreme is the very broad meaning that identifies gifts and talents with whatever capacities a person has, and that values these in and for themselves and not in relation to others. With such a definition everybody is gifted and talented just by virtue of being a person, and education of the gifted and the talented is the same thing as education generally. While the definition is thus generous and inclusive, and is calculated to make everybody feel significant, it has the defect of being so broad as to make no distinctions and hence to yield no guidance for policy decisions, where one must differentiate between alternatives.

A narrow definition of gifted and talented results when a certain specific type of competence is identified in order to distinguish the more from the less highly endowed. For example, some measure of general intelligence can be employed to make the desired discrimination, so that the gifted are defined as those at or above a certain I.Q.

As suggested earlier, the narrow, one-measure definition of giftedness has come to be widely regarded as too restrictive because it fails to distinguish different kinds of competence from that measured by the one standard. Most policy makers now tend to frame their definitions at some intermediate point along the broad to narrow spectrum in order to be able to include a wide variety of excellences but without being so broad as to count every capacity as a gift or talent and everybody as gifted and talented.

A closely related semantic issue concerns the definition of gifted and talented in terms of persons or functions. Here also the value implications are powerful and the political effects of one type of connotation or the other substantial. The issue is whether the adjectives gifted and talented shall be

taken as referring to persons or to the functions they perform. Is it possible to identify certain people as gifted and talented as compared with other people who are ordinary? Or is it rather that there are certain gifts and talents with respect to certain functions that people perform, and that people are not gifted and talented as a whole, but only with respect to any given function or set of functions?

This is an issue that is not purely a question of values, since there are important factual dimensions to the problem. It is a matter for empirical inquiry to determine in how far the ability to function in one way is correlated with ability to function in some other way. For example, is manual skill highly correlated with skill in the use of symbols, with artistic creativity, and with moral sensitivity? In other words, is there some general ability factor that makes it possible for a person to excel in anything in the degree to which he possesses that factor? If there is such a factor, then it is not necessary to make a choice between a person-based definition of gifted and talented and a function-based definition, for the empirical evidence will have shown that a person who can do one thing better than another person can also do anything else better, and hence persons both as a whole are gifted and talented and they function in every respect in a gifted and talented way.

While no final empirical answer can be expected to this complex question, the evidence available suggests that the truth lies somewhere between the extremes of perfect correlation among functional capacities and no correlation at all. It is not surprising that there should be some general factors of sensitivity, quickness, and the like that manifest themselves in a variety of ways of functioning. Hence it is to be expected that some correlation among abilities exists, and that there may be some basis in fact for ascribing a higher level of competence, on the whole, for one person than for another person.

However, it is clear that the correlation is far from perfect, function by function, and that in any given case one person may rate higher than another person in respect to one function and lower than the same person in respect to another function.

This type of analysis suggests a possibly useful way of sharpening the distinction between the term gifted and the term talented. A talent might be defined as a high degree of ability to function in some particular way, as, for example, in playing the violin or in settling quarrels. Giftedness, on the other hand, might be defined as the competence level of a person "on the whole." This level could clearly not properly be measured by any single test, but would require the use of a variety of measures and the construction of some kind of mean of the several measures. Giftedness would thus represent a high general level of talents, taking account of a range of kinds of ability. The term talent would then be the basic functional term and the term gifted would be a derived term referring to persons rather than specific functions, and the combined term gifted and talented would constitute a compromise term between pure personal ranking and complete functional discrimination.

Using the term gifted as meaning competence "on the whole" may obscure important differences between persons of comparable levels of giftedness, in that one person might have a moderate degree of ability in several functions, while another person might have a very high level of ability in one function with unexceptional capacity in other functions. These differences would be of great import in career education, in which one of the important problems is how to meet the different career preparation needs of the person with a single extraordinary talent as contrasted with the multiple talent person. For the former type, it may be argued, the basic need is to provide opportunity to exploit the one unusual talent to the full, while for the latter type the basic need is to afford opportunities for surveying and testing the variety of career possibilities available and for engaging both in effective choice-making and in resolute renunciation of alternate career possibilities -- the continued

flirting with which would interfere with the successful prosecution of the chosen vocation. In this sense career education for the gifted (as the many-talented) may require substantially different policies and programs from education for the talented, in which the primary emphasis is on identification and career development of specified functional competencies.

Another way of handling the semantic problem of gifts and talents would be to use them as synonyms, as is commonly done in practice, but to note that either concept or both concepts can be used in a general sense, connoting level of ability "on the whole," and in a special sense, connoting particular manifestations of ability. Thus, one can speak of a person as gifted or talented, and then analyze that giftedness or talentedness in terms of specific gifts or talents.

The issue of the meaning of gifted and talented is clearly complex. It involves not only the question of what is regarded as valuable by the educating society, but also empirical questions of multiple abilities and how these are related to general ability levels. Decisions as to how educational opportunities are to be made available to persons identified as gifted and talented depend not only on the value preferences and correlation facts mentioned in the foregoing, but also on certain presuppositions in social philosophy that will be examined in sections 6, 7, and 8 below.

4. The Human Condition: Work and Play

Moving now from the semantic issues, a second type of value concern has to do with what is considered the good life for human beings and with the kind of education that can best serve that ideal. The idea of career education gives rise to these questions with particular urgency because of the intimate connection of a person's career to his personal destiny.

One way of framing the issue is to make use of the pair of contrasting concepts work and play. Is the human condition best described as a life of work, and is a person's destiny primarily to be understood in the light of his contribution as a worker, or does the category of play yield the best clue to the meaning of human existence? If we assume that career education is directed

toward the life of work, then the significance of such education will be judged by the value ascribed to work within the total scheme of a person's life.

A classic example of a work-oriented concept of the human condition is found in what has come to be called the Puritan ethic. In it, work is regarded as the principal way in which a person fulfills his calling in life. A high value is placed on industriousness, seriousness, punctuality, orderliness, responsibility, foresight, saving, efficiency, and other characteristics that are desirable for the successful worker. The sociologist Max Weber in a celebrated study sought to establish the relationship between such virtues and the rise of modern capitalism. From this point of view career education may be regarded as fundamental, with other aspects of education, such as that for leisure-time pursuits, occupying at most an ancillary place. The set of values characteristic of the Puritan ethic are, of course, not limited to cultures stemming from Puritanism historically. One finds similar values, for example, in the dominant work ethic of communist societies, though with a different ideological justification.

There are other value systems in which work is not as positively regarded as in the views just described. There is a perennial and pervasive tradition in which, far from being the basis for one's life fulfillment, work is regarded as an undesirable necessity and burden which one tries as far as possible to minimize. An ancient symbol for this view is contained in the biblical account of work as a punishment for the sin of disobedience to the divine command. One works in order to live; he does not, as the Puritan seems to do, live in order to work. The justification for his existence is found not in work, but in the more truly humane pursuits which leisure makes possible. This concept is suggested in Josef Pieper's essay entitled: Leisure--the Basis of Culture,

in which it is argued that the highest human capacities are fulfilled not in meeting the necessities of life maintenance but in responding to the opportunities that freedom from such necessities affords.

This idea of a source of cultural creativity distinct from that of gainful work is given convincing expression in Johan Huizinga's book, Homo Ludens, in which he argues that in every field of human life the creative fountain of culture is play. In contrast to the long-term, utilitarian, necessity-based activity of work, play is conceived as strictly limited in space and time, of intrinsic value rather than instrumental to anything beyond itself, and as a freely-chosen and freely-pursued disciplined activity, yielding an extraordinary quality of experience as contrasted with ordinary workaday responsibilities.

The dominant note of play is celebration and its psychic concomitant is joy. Much contemporary social criticism has emphasized the dehumanization and cheerlessness occasioned by the dominance of the austere work ethic, in both capitalist and communist societies, and has postulated the need for a new life-orientation centering instead in the values of intrinsic enjoyment, creative expression, and liberation from the bondage of the established productive system.

This conflict in total value outlook is evident in contemporary discussions of educational policy, directly implicating the proponents of career education. Ivan Illich, for example, sees schooling as a system for channeling people into an inequitable and alienating socio-economic order largely determined by the work requirements of the advanced industrial societies. He calls for the deschooling of society and the substitution of alternative means of educating people for a life of creative endeavor and of joyful celebration. Radical educational reformers generally tend to regard career education as a means of reinforcing existing institutional structures both within and beyond the schools

and of making more difficult the societal transformation that they believe a truly humanizing education requires. Such critics may be expected to be particularly negative toward career education for the gifted and talented, for it is from persons of unusual competence that they would hope for and expect the maximum contribution toward social reconstruction. They would tend to regard such education as a form of cooptation of the able by schools on behalf of the establishment.

For those who are engaged in policy making for career education for the gifted and talented the issue symbolized by the contrast of a work and a play outlook suggests the care necessary to insure that a sufficiently broad concept of the good life be employed, so that on the one hand the schools do not become merely the obedient tools of existing economic interests and on the other hand that they respect and serve the worthy ends of the many ingenious and beneficent institutions that have been created to minister to human needs. An example of the kind of penetrating social thought that suggests a viable middle way is found in Hannah Arendt's study entitled The Human Condition. She first distinguishes between the contemplative life and the active life, the former having been the chief end of man in classical Greek thought, and, it may be added, in much Oriental thought as well, but in modern times displaced almost entirely by the active life. The latter she divides into three types of activity, which she designates respectively labor, work, and action. By labor she means activity devoted to maintaining the production-consumption organization needed to keep the biological processes of life going. By work she means the making of artifacts that transcend the life process and that have some measure of endurance, as in the creations of the artist. By action she means those activities through which human beings freely create communities bound together by meaningful historical traditions, myths, and ideals. Her thesis is that in

modern industrial civilization the values of labor for life maintenance have been exalted to the highest position, while the values of creative work and of communal action have been made subordinate and those of contemplation have been virtually eliminated.

On the basis of such a conceptual scheme it would be possible to construct a mediating program of career education for the gifted and talented that takes account of the various dimensions of the human condition and their relative priorities. Thus, it might be argued that the highest common vocation of man is the creation of free communities of responsible citizens, and that preparation for this calling ought to constitute the core of career education. Subordinate to this central aim and governed by it would be preparation for the creative work of the individual artist and craftsman and for the labor necessary to maintain life. Beyond the central action core, on the higher side, would also be such preparation for the contemplative life, as would comport with the communal covenant and the vocational needs of particular persons. The use of this kind of action-centered concept of career with due regard for the other related dimensions of the human condition would also afford a means of defining a variety of gifts and talents and their relation to the common good. Thus, some persons excel in labor skills, others in the work of artistic reation, some in political action, and others in the arts of contemplation. Education would be provided to develop these several capacities in the respective persons who possess them, but always within the context of the total scheme of governing life values, which in the present illustration would be taken as centering around the calling to be a free and responsible person in community.

5. The Problem of Time: Change and Permanence

The concept of a career has assumed a new aspect in the contemporary epoch due to a revolutionary change in the time factor in human affairs. Traditionally

a career has meant a course of life that one runs within a relatively enduring context. Education for a career under these circumstances presupposes the possibility of planning ahead for the role one will play in life and making whatever preparations are needed to play the part competently. Within recent times these expectations have become problematical as a result of the very rapid changes that take place in the modern urbanized and industrialized world. It is no longer possible to count on the world in which a person functions being substantially the same only a few years hence as that in which he lives today. The only certainty is that it will be different. It is not even feasible to predict with any confidence the shape of the future to be expected.

In the present age it is almost as if the roles of actor and scene have been reversed: instead of the person acting out the phases of his life against a permanent scene, the scene constantly shifts while the bewildered actor tries desperately to find some stable points of reference by which to orient himself. More than to man, the career now seems to belong to the world, and if anything is to endure, it seems that man must establish it.

Under these conditions of world transiency, career education takes on new significance and generates new problems. The idea of a life pattern to be laid out in advance and of clearly defined abilities to be fostered in preparation for living that life is no longer tenable. People must now be educated not only mainly for their own careers but for the effective management of life within the context of the world's vertiginous career.

The situation of physical and cultural change is a matter of fact. The value issue concerns what is to be done in the face of that fact. The choices made will depend on the relative values assigned to change and to permanence. On the one extreme, it is possible to accept the flux of things and ride along with it, not attempting to wrest any permanence from the flow of time. With

that orientation, the idea of career education loses all force. Indeed, the notion of education as preparation for the future disappears and is replaced by the concept of education as a present-oriented mode of living. Given the uncertainities of the morrow and the sensed irrelevance of the past, the curriculum tends to be a series of emerging episodes growing out of the immediacies of present experience. It is typified in the open classroom where individuality and self-direction controlled by current personal interests become the basis for deciding what shall be learned. Such a curriculum makes a virtue of change and fosters a learning climate in which the values of discontinuity, surprise, and spontaneity are celebrated. It is defended on the ground that such educational experience best accords with the kind of unpredictable life that the rapidly shifting patterns of existence impose on the modern citizen. It is difficult to conceive how anything that can reasonably be called career education can be associated with this extreme position.

On the other extreme are those who place a high value on permanence, and for whom career education is conceived as a means of arresting the erosions caused by the pervasive transitoriness of the modern age. The effort of the advocates of this position is to identify elements of invariance within the flux of events and to build these into the curriculum. One example of how this identification may be accomplished is afforded by those who recommend the use of the disciplines as the source of curriculum content. The disciplines, it is said by these proponents, represent relatively stable ways of organizing experience, using principles and concepts that change much more slowly than do the particular items of knowledge yielded by inquiry. For example, historical interpretations change much more radically than the basic methods of historical inquiry and the canons of historiographic evidence. Similarly, the findings of scientists reveal many new and hitherto unsuspected facts modifying

in important ways the prevailing view of natural phenomena, while the principles of scientific investigation have remained substantially constant during this transformation of outlook.

From such considerations as these stem the pedagogical recommendations of those who advocate emphasis on the teaching of basic concepts and on the methods of inquiry rather than on information and on the knowledge outcomes of inquiry. Students are taught to think the way historians or mathematicians do rather than to learn what historians and mathematicians have discovered. The use of what is called the discovery method has this objective. On the same basis it is possible to understand the shift away from the accumulation of factual knowledge and techniques, in a study such as engineering, toward a theoretical orientation that enables the student to derive facts and techniques for new situations from the fundamental principles of science.

Program of this kind are evidently oriented toward what is essentially a career outlook. Students are taught to think like persons who have dedicated their lives to the discipline of a particular calling. In so doing they identify with the professionals who have gained the fundamental grasp that enables them to maintain a core of stability amid changes in particular circumstances and concrete instances.

It is reasonable also to expect that the deeper understanding that the disciplined outlook affords should be particularly attractive and effective in the case of the gifted and talented. It can, indeed, be argued that the ability to comprehend the constancies that underlie superficial differences is itself a mark of giftedness and that one way of identifying talent might be by assessing the responsiveness of persons to a basic methods and concepts curriculum in place of the accumulation of information. A case can thus be made for the special contribution of a discipline-oriented kind of education

as the basis of career preparation for the gifted and talented, assuming the value of principle-oriented competences that help to maintain continuities amidst the uncertainties and transiences of contemporary civilization.

When intermediate value positions are taken between the extremes of change and permanence, a modified and flexible concept of career and of career education becomes possible. The values of permanence may be maintained by affirming the principle of relatively long-term work commitments making use of competences developed through education. At the same time, the values of change may be acknowledged by recognizing the need for career changes to meet the needs of new social, cultural, and personal circumstances. A person living in the rapidly changing modern world may find it necessary or desirable to have more than one career. The educational provisions required in that case are substantially different from those suitable for persons planning for a single career. The probability of multiple work commitments makes breadth of preparation particularly important, in addition to using the methods and concepts of the disciplines. This curricular breadth is not only desirable so that a wide range of initial career options may be made available, but so that the process of career choice may continue as a permanent feature of the worker's life pattern as he moves successively from one activity to another in response to emerging cultural needs.

It is reasonable to expect that the multiple career pattern will be unusually pertinent to the gifted and talented. Many of the most able people can do many things well; their capacities may be employed to good effect in a variety of different lines of work. Special consideration may be given to the ways in which these persons can be helped to organize and distribute their abilities within the context of changing conditions of life. Many people of exceptional powers work better with changing circumstances providing successive new

challenges than they do in a more stable context. Obviously important for persons of multiple careers are provisions for education throughout life and not just in the years of youth. Such provisions are essential in the light of obsolescence, to update competences in any given career, but also to afford opportunities for those who are able to undertake new careers at any age, as new challenges are presented.

6. Social Values: Generalist and Specialist

One of the central value issues in all social policy concerns the way human differences are handled. Any society is a society by virtue of the fact that the people who comprise it live according to some kind of order that sets the conditions for their effective co-existence. A collection of unrelated individuals does not constitute a society. The anarchist who denies any norms governing social behavior denies the very being of a society. In this sense those who would push to the extreme the value of human differences--those who would make an absolute of plurality--negate the essence of the social. The standards that define a social order are principles of unity. They are the commonalities that unite the plural elements of which the society is composed.

There are two broad patterns in which a social order may be conceived. In one type each person is expected to function in a whole range of activities that are substantially the same for everyone. The unity of the society consists in the concordance of the behaviors which the members exhibit. In the other type of pattern certain groups engage only in certain distinctive functions, which differ from those of other groups, and the unity of the society consists in the organization of a system of mutually beneficial exchanges of services according to certain rules. In the first type of society the members are generalists; in the second type they are specialists. In the first type the unity

of the society is based on the relative homogeneity of conduct of the members; in the second type the unity is based on principles of reciprocal support for the common good.

These two patterns are characteristic of simple and complex societies, respectively. The more complex the society the more specialization of function is required and the greater the degree of coordination of specialists. The high levels of civilization characteristic of modern industrial societies would be impossible apart from the extensive development of specialized workers. On the other hand, extreme specialization tends to be self-defeating. Buckminster Fuller has pointed out that in the evolution of species, specialization, which at one stage is necessary for efficient adaptation to a given environment, eventually leads to extinction, because the species specialized in one way does not have the ability to adapt to novel circumstances. Accordingly, Fuller argues, the clue to long-term adaptability are generalized powers that can be made serviceable in a variety of conditions. He adds that the supreme example of such generalized powers is found in human reason, with its capacity for abstraction, imaginative construction, and concrete application to particular cases.

Apart from these points in favor of generalized powers, it is evident that in a complex society, even though specialists are necessary to produce the required range of goods and services for the benefit of all, the successful coordination of the many different specialties depends on some degree of understanding by each specialist of the patterns of interrelationship that unify the separate elements of the society. Such understanding constitutes an important kind of general knowledge that goes beyond the limited understanding of the specialist.

The foregoing considerations suggest the nature of the value issue set by the contrast of generalist and specialist. The values of generality are those of comprehensiveness of grasp and of commonality among the persons who inhabit the social order. The values of specialism are those of depth and concentration of powers, resulting in maximum functional efficiency.

These issues have direct import for career education. Basically, the notion of career suggests specialization. A career is a particular path of life marked out and distinguished from other paths. Careers presuppose what may be called a horizontal stratification of society--a channeling of persons into more or less separate and distinct, though interrelated, life lines. Correspondingly, career education presupposes more or less separate and distinct provisions for learning, each in accordance with the preparation needs of the career to which it is directed. Career education, then, will normally be conceived in terms of specialized studies and of multiple curriculum concentrations.

On the other hand, the values of generality may find expression in various ways in career education. The extreme of generality, which would amount to educational anarchy, evidently would not qualify in any recognizable concept of career education. But more moderate forms would be suitable. One type of provision is for instruction in the world of diverse careers so as to enable each person in his chosen career to understand how his work relates to that of persons in other callings and thereby to enable him to make his contribution with a sense of his place in the whole social scene. Another type is the education of persons whose distictive calling is that of social coordination. Such persons--serving as political officials, administrators of large organizations, social theorists, publicists, and the like--have careers that by their nature demand a large measure of generality. The existence of such lines

of work shows that career education is not necessarily specialized, or at least that there are those whose specialization as social integrators requires a great deal of general education to give them the comprehensive outlook their work requires. Generality is also required in the preparation of those who will undertake more than one career, as discussed above in relation to the values of change and permanence. Furthermore, a narrowly specialized type of career education is more readily subject to obsolescence than is a more general one that makes provision for adaptive modifications and movement into new kinds of endeavor.

The relative roles of general and special studies sketched in the foregoing may have particular features in the case of the gifted and talented. As suggested earlier, the distinction between gifted and talented is frequently made in terms of generality and specialism: the gifted are sometimes conceived as those with high general intelligence and the talented as those with unusual specialized abilities. It might then be argued that the career education of the gifted should emphasize general studies and that of the talented specialized studies for the cultivation of particular talents. On the other side, it can be urged that the fact that a person has high general ability does not imply that he should spread himself over many pursuits rather than choosing one and concentrating on it. Nor is it necessarily the case that the person of one talent does not need to complement it by studies of broader import than his area of special competence.

Thus, the case of career education for the gifted and talented, while presenting distinctive features as compared with career education generally, still requires decision on the relative weight to be assigned to the general and the special, in the light of the prevailing social philosophy among those by whom the decision is made.

7. Social Values: Hierarchy and Leveling

The issue of generalist and specialist refers to what is in effect a horizontal stratification of society. Another issue in social philosophy concerns vertical stratification, in which the contrast of positions may be put in terms of the pair hierarchy and leveling. With respect to this issue it is the idea of education for the gifted and talented that comes to the fore, and not, as in the case of the horizontal stratification issue, the idea of career education.

Those who affirm the value of hierarchy see any social system as requiring a distinction between those who command and those who follow--between what Harold Lasswell calls elite and mass: the elite are those who have effective control of the goods that people desire, the mass are those whose share of the goods of life is determined for them by the elite. Hierarchy is not a matter of form of government; it is consistent with democratic regimes as well as with oligarchies or aristocracies. It is simply a question of acknowledging the possession by certain persons of higher levels of authority than others. On the other hand, those who support the leveling principle affirm the essential equality of persons and reject the assignment of persons to different levels of authority.

The prima facie case for hierarchy is that people do in fact differ greatly from one another in natural endowments. It seems reasonable, then, that those differences should be reflected in the structure of social arrangements, so that each person occupies a position that corresponds with his nature and capacities. This was the basic principle of Plato's ideal commonwealth, in which each person was assigned the position within the body politic for which his abilities best qualified him. Justice in the state was then conceived as each person occupying his appropriate level in the hierarchy of social positions,

with rational men ruling, courageous men keeping guard, and artisans supplying the needs of the community for ordinary goods and services.

The prima facie case for leveling is the deeply felt conviction that in some sense all men are equal, despite their apparent differences, and the manifest fact that hierarchical schemes, no matter how ideally conceived, have historically served as instruments of domination and unjust exploitation. According to the levelers, the existence of natural differences is no justification for differences in levels of authority or privilege. On the contrary, it is said, social arrangements should be such as to minimize or nullify the effect of such differences, in order better to realize the deeper equality of persons.

Making special provisions in career education for the gifted and talented has natural affinity to the hierarchical outlook. When there are positions of command to be filled, it is reasonable to fill them with the most capable persons, thus insuring maximum efficiency in social control. It is desirable to provide the requisite educational facilities to prepare those exceptional people to play their roles well. It is thus to be expected that career education for the gifted and talented will tend to sustain the power structure of a hierarchically organized society.

On these grounds it is reasonable to suppose that persons with strong leveling convictions will tend to regard with disfavor career education for the gifted and the talented. They may urge that the gifted and talented may be expected to do well enough with ordinary educational provisions and that if any special opportunities are to be planned they should consist of career education for the disadvantaged, in order that some measure of equalization may be effected, and so that the existing hierarchies of power and privilege may be flattened out instead of being accentuated.

Between the two poles of hierarchy and leveling it is possible to adopt mediating positions that take account of the values of both extremes, and to frame modified conceptions of career education that justify certain types of special provision for the gifted and talented. Fundamentally, the problem is to frame a concept of social justice that makes allowance both for the differences between persons and for the ideal of human equality, and then to set up career education policies for the gifted and talented that accord with such a concept.

An example of one such mediating concept of justice is that developed by the social philosopher John Rawls in his book, A Theory of Justice. According to Rawls, justice is conceived as fairness, and may be defined by two fundamental principles. The first is that every person is to have an equal right to basic liberties such as the right to vote and to hold public office, freedom of speech and assembly, freedom of thought and conscience, the right to hold personal property, and freedom from arbitrary arrest. The second principle is that the distribution of wealth and of power through the assignment of positions of authority is to be such that differences in these benefits are to everyone's advantage. The first principle of equal liberty is prior to and takes precedence over the second. In this way the value of equality is given the first place. However, this principle does not entail a total leveling of economic and political claims, the equitable distribution of which is governed by the second principle. The essential idea of the latter is that justice is served by differences whenever giving more goods or greater authority to some persons will result in greater benefits to all persons in the society. Thus, for example, there is nothing unjust in giving a person extraordinary educational advantages if as a consequence that person will be able to use his knowledge

and skill to the benefit of everyone, such as by inventing new productive processes, by writing excellent books, by creating significant works of art, or by exercising unusual managerial capacities. Hierarchies of power and privilege are unjust only when the advantage of those higher up is gained at the expense of those at lower levels.

Principles such as those of Rawls clearly have application to educational policy making. Assuming one seeks to frame educational policy in the light of the social value of justice as fairness, he would recommend, first and fundamentally, education for free and equal citizenship, through institutions that embodied in their total program, including selection procedures, administrative processes, and teaching methods, the liberties that are the equal basic right of all citizens. Within that fundamental context, he could then recommend programs of career education designed to prepare citizens for kinds of work that could be expected to be to the advantage of all the people and that do not subserve the particular interests of private persons or special groups to the disadvantage of others. Finally, he could recommend special educational provisions for the gifted and talented in ways and to the degree that such unusual opportunities could reasonably be expected to benefit everyone in the society. Through some such intermediate policy the respective social values of both hierarchy and leveling may be assured in the program of career education for the gifted and talented.

8. Social Values: Person and Collective

A final value issue concerns the relative weight given to persons and to social institutions in the provisions for education. On the one extreme is the position that since every human being is unique and since this uniqueness is the peculiar glory of the human species, the aim of education should be

the cultivation of each person's singular and non-duplicatable nature. This view when pressed to its logical conclusion casts doubt on the desirability of education itself, since it is hard to see how a teacher with such a view could presume to influence the development of any other person without violating that other's uniqueness. It is on these grounds that Carl Rogers, exponent of non-directivity in human relations, prefers to set aside the idea of education as teaching in favor of the idea of learning. The role of the educator then is to aid the learner in the pursuit of his own singular developmental objectives.

On the other extreme is the position that education should be concerned with influencing persons for the benefit of society. The collectivity and not the person is the bearer of value. Persons are through and through social, and can reach fulfillment only through identification with the collective life. On this view, education is a process of socialization. The immature young need to be enculturated so as to be able to realize their destinies within the society to which they belong.

On the whole, organized education is biassed in favor of the collective values. As itself one of the deliberate agencies of society, the institution of education tends to respond to collective needs. Schools are in the main reflectors of the larger social scene. Furthermore, economic considerations dictate a collective orientation, since a purely personalist pedagogy would ideally require a prohibitively costly one-to-one ratio of teachers to students.

Career education also tends to have a collectivist bias, since its aims are defined in terms of the students' potential contributions to the satisfaction of social needs through useful work. A similar presupposition holds for career education of the gifted and talented whenever such persons are marked for special consideration in order to capitalize on their exceptional abilities

for the sake of the common good. The concepts of gifted and talented are generally treated as class concepts, and the persons so designated are usually regarded as constituting certain special groups whose collective characteristics make it desirable to provide career education opportunities different from those provided for other classes of persons.

As in the other value issues, the policy maker may seek an intermediate position that does maximum justice to both the personal and the collective elements in education. One obvious solution is to recognize that career education is not the whole of education and to provide a reasonable balance between humanistic general education designed for the growth of persons in their uniqueness and career education aimed at serving collective needs.

A second way of accommodating both values within career education itself is to insure maximum freedom of choice in the election of the course of study and maximum variety of options in order that the choice may be effective and not merely nominal. When a person chooses a career freely from a broad range of possibilities and with adequate knowledge of these, and when he undertakes his educational preparations in consequence of such a choice, he in effect personalizes his education. Such action contrasts with the case of those within an effectively collectivist context whose career and educational assignments are determined by force of economic or social circumstance or by bureaucratic fiat within a highly controlled social system. From these considerations it is evident that the maintenance of personal values in career education is largely dependent--as are most policy matters in education--on the value system and the associated institutions prevailing in the society as a whole. A highly collectivizedsocial order tends to press into service collectivized forms of career education affording little choice to individual students, while an open and

liberal social system emphasizes the personal element in career selection and preparation.

Finally, career education, particularly for the gifted and talented, can be saved from impersonal collectivization by making a clear distinction between functional differentiation and class stratification (whether conceived horizontally as specializations or vertically as prestige levels). Class stratification is impersonal in that individuals are regarded in toto as belonging to a certain group, and their behavior expectations are stereotypic. Doctors characteristically are such and such and do so and so, while plumbers have a different set of traits and patterns of conduct. Likewise, the gifted and talented, stereotypically considered, manifest certain characteristics that ordinary people do not. By contrast, the personal outlook, emphasizing the uniqueness of each human being, presupposes that any person can be classed with certain other persons for certain limited purposes of functional identification, but that each person in his own being is a singular combination of functional capacities. Each person plays many roles, and his uniqueness forbids the presumption that these roles have any fixed correlation that justifies stereotyping. A doctor functions in accordance with certain class norms that qualify him for medical practice. But he also functions in other ways, as an artist, as a parent, or as a citizen, that are independent of his doctoring activity. Similarly for any other career specialty or for any designation of gifts or talents that may be assigned for certain limited educational purposes.

To combine fairly the values of the person and of the collective, the program of career education for the gifted and the talented may be organized so as to avoid closed tracking channels that serve to confirm stereotypic classifications. Ample provision can be made for flexible assignment and for

achieving the widest possible range of combinations of specialized pursuits so as to realize the ideal of personal uniqueness as singular articulation of multiple functional capacities.

Conclusion

The foregoing paragraphs have identified some basic value issues that are pertinent to the formation of policy for career education for the gifted and talented. In one form or another each of these issues is operative in any decision on educational programs; some position on each is presupposed in whatever policy is adopted. It is reasonable to suppose that the decisions made will be more rational and better justified if the values they embody are consciously recognized and if these values are themselves subject to initial scrutiny rather than being unconscious and unexamined. Proponents of educational programs and policies are likely to be able to give convincing reasons to those they wish to influence if they state the larger value commitments which they intend to serve by such programs and policies.

The purpose of this preliminary statement, then, is not to engage in theoretical di lectics for their own sake, but to suggest some of the dimensions of semantic, ethical, and social analysis that will move the questions of career education for the gifted and talented from the level of short-term expediency and pedagogical fashion to that of soundly based and critically examined policy consonant with basic civilized values.

Supplemental Value Considerations in Career Education for Gifted and Talented Persons

Introduction

The preceding chapter (Chapter VI) represents, in its totality, the contributions that Dr. Philip Phenix, Teachers College, Columbia University, as a seminar member, made to the issue of value considerations in career education for the gifted and talented. We consider his contribution to be of sufficient importance and value so as to deserve a separate chapter of this book.

At the same time, the issue of values in career education for the gifted and talented was of interest and concern to other members of the seminar as well. Two seminar members summarized their thoughts in writing while others, because they were making other written contributions to the topic, limited themselves to oral expressions during the six days in which the seminar met. These contributions, like those from Professor Phenix, seemed to us too important to ignore. Therefore, they are included in this chapter.

The chapter is divided in three parts. The first represents a narrative presentation of certain value issues written by Dr. Jack Willers, George Peabody College for Teachers. The second represents an outline of certain basic value issues constructed by Dr. Edwin Herr, Pennsylvania State University. The final portion of the chapter is devoted to an attempt to summarize additional comments of seminar members made during the course of the seminar itself.

Career Education--for the Gifted and Talented?

"Career education for the gifted and talented," the very phrase itself--whatever the range of its conceptual connotations--produces a cultural discord in our emotive hearing. Career education is itself a relatively new and unfamiliar sound. As such, conjoined with even well-known and highly valued educational pursuits, career education might strike chords of threat and caution and uneasiness.

Is it novelty or unfamiliarity of career education alone--even the uneasiness due to the incomplete conceptualization of career education--that makes the conjunction of education of the gifted and talented with career education unpal table, incongruous, disharmonious? Perhaps so, for education is a cautious and conservative profession historically, and contemporary educators are not praised for their courage, faced with the need to innovate and reconstruct. But, then, the dangers are large and the risks high--these are sensitive and malleable minds we educate, and professional errors of judgement are diffused throughout the culture, and are a long time emerging.

Still, career education for the gifted and talented? Better for the handicapped. Or for the poor and disadvantaged. Surely for the minorities--they deserve the compensation, the break, the favor. But career education for the gifted and talented sounds more like refrigerators for Eskimos, air planes for eagles or swim suits for fish.

The whole idea on the surface sounds something like an invitation to play the old confidence games: Get rich quick; let me do you a favor; I've got something for nobody but you; this is just the thing for you; only you deserve this break.

So, is it career education for the gifted and talented, or the gifted and talented for career education? And if the latter, is it another case of the best learning for those learners who need it least, or the best learners for the learning which needs them the most? Admittedly, these questions put our suspicions in their crudest form, but at the same time, they open doors for critical inquiry and the evaluation of interests and motives.

But first, the questions themselves. Like all inquiries, these too harbor value judgments, assumptions, and hidden conclusions that require questioning themselves.

For example, if career education is such a boon, why not direct it primarily to those who need it more than the gifted and talented, such as the disadvantaged or the handicapped?

This would be a good question if the disadvantaged or the handicapped comprised a class totally exclusive of gifted and talented learners. But such is not the case, for however the gifted and talented may be defined--whether in terms of natural capacities or nurtured skills, or as intellectually superior or artistically sensitive--they can be identified in all other human categories--in all minorities, all economic classes, all social conditions, and in all cultures. Gifted and

talented people are everywhere, no matter how human beings are categorized; and whatever career means or may come to mean, if it is not universal in the sense of the totality of education, it is in the sense of being a kind of education for everyone.

Thus, the challenge persists to fathom the peculiar requirements of career education for the gifted and talented, no matter what other human classifications they may fit or fall into. One of those requirements of career education, then, pointed up by our questioning, is to identify the gifted and talented in various pigeon holes where even well-meaning psychologists, sociologists, educators and bureaucrats tend to lose people--amid the minorities, the handicapped, the disadvantaged, the poverty stricken, the alienated, the drop outs, and those called "misfits" because schools and society have yet to create broad and flexible roles into which they may choose to fit and find themselves.

Man must and will abstract and analyze--even himself and his own kind. Categories of humanity are inevitable if we are to cope with the complexities of human experience and solve, gradually and piecemeal, some of our meanest social and educational problems. Given the practicality and necessity of classification, a second requirement of career education for the gifted and talented is that it teaches the specialized functions and limitations of labeling human beings, their activities and their careers.

One career does not exclude another. Indeed, one of the basic purposes of career education is to provide for serial careers, one career leading to still others, and indeed simultaneous careers that complement rather than conflict with one another.

Furthermore, to be gifted or talented is not to be gifted or talented in all affairs. The gifted and talented, then, may need career education at its best, the most for the very reason that their gifts or talents are so highly specialized that they require the best guidance and preparation to participate adequately in the more general or common human affairs and social activities. From this perspective, career education for the gifted and talented, instead of appearing to be an elitist education for meritocracy, becomes an egalitarian pursuit, yet void of the threat of mediocritizing excellence.

This egalitarian direction may be pursued further with the perspective that the gifted and talented are <u>not</u> an identifiable class, but rather <u>all</u> have some particular gift or some special talent that deserves educating in the sense of career--socially rewarding and personally satisfying. From this point of view, our problem would be the career development of gifts and talents--of skills, potentialities, interests, abilities, and functions rather than people. Paradoxically, as usual on the human scene, when a little is gained here, a little is lost there.

When the gifted and talented are identified as a specific, if not separate group, there are the risks of specialization, classification, and elitism. But when education aims at the development of roles or functions or skills, there are dangers of reducing the whole being to uncoordinated and unrelated parts. As always, the educator's problem is not one of either-or, but of constantly rebalancing emphases.

Certainly, the gifted and talented are exceptional at some identifiable human effort or socially useful activity. An academic definition of "gifted and talented" which ignores these factors would make career education for the gifted and talented utterly meaningless. For instance, a definition of "gifted and talented" by IQ score alone, which does not identify the social usefulness or human satisfaction of intelligence, would be totally inadequate as a basis for the career education of the gifted and talented. Thus, a further requirement and possible contribution of career education of the gifted and talented may very well be the definition of that group in career terms of its social contribution, productivity and usefulness, and personal development, satisfaction, and self-identity.

So far it seems fair to suggest that career education for the gifted and talented is not a confidence game rigged in favor of career education. If career education can meet these requirements, it has as much to offer the gifted and talented as it may hope to gain.

No matter how well career education responds to the challenges of educating the gifted and talented, the suspicion may still remain that career education needs the respectability of the gifted and talented by virtue of their traditional affiliation with the professions, the sciences and the arts. Of course, it should be noted immediately that not all gifted and talented have been or are professionals, academicians, or scholars in the liberal arts tradition. Of graver concern, however, is the validity, prestige, and legitimacy our society continues to bestow, without question, on the traditional curriculum and the uncritical transmission of our cultural heritage. This is not to disclaim the value of understanding our cultural heritage. On the contrary, as our society continues to struggle with the crises of conflicting aims, weakened traditional authorities, and failing intellectual and moral postulates, knowledge of the cultural heritage is far more important for its reconstruction and redirection than in the less vibrant, more stable past.

But given the more transcient and mobile society of today, education of any kind with any purpose directed toward whatever group will fail as long as it aims solely, or even mainly, at depositing the values and knowledge of the past in passive, inert minds. This vital point has been reiterated and reemphasized too many times for career education to miss its challenge of reform--to fail to turn the curriculum from the past to the future, and learning from the mere acquisition of knowledge to the art of utilizing knowledge.

From this perspective, then, the gifted and talented, insofar as their education has been identified with the traditionally valued accumulation of skills and information only, are not a source of social prestige to career education, but, to that extent, rather a liability and certainly a danger.

It must be admitted, however, that career education is failing in its formative stages to quiet the suspicions of at least three groups: the liberal arts educators, the vocational-technical educators, and the vast numbers of economically, if not culturally and politically, oppressed minorities in America who have been victimized by that great "equalizer of democracy"--education. Unless these three groups, to say nothing of teacher educators, can see, even contribute to, the emerging concepts and values of career education--not just for the gifted and talented, but for all--career education for any identifiable group will continue to face serious limitations.

To complicate matters, one of these groups in general--the liberal arts educators (who have in the past monopolized the education of the gifted and talented as identified traditionally)--fear the near opposite of what threatens another group--the vocational and technical educators. The "liberal" educators--so called originally because they provided "liberal education" to those already free from economic and political restrictions--are afraid that career education is merely a novel euphemism for vocational or job training. The vocational educators, on the other hand, feel in general some threat that career education will siphon off public support from their area of interest and contribution, minimizing their own social usefulness.

Both factions, if that is what they are, deserve some criticism--the liberal educators for graduating and credentialing socially useless bores, and the vocational educators for training people in narrow, obsolete skills that lock workers into dead-end "careers".

To date there is some evidence that the liberal arts educators' suspicions are valid. While vocational and/or professional training has from the very beginning been conceptualized as an essential aspect of career education, most definitions of career education in the new literature give work, jobs, and marketable skills pre-eminence, neglecting or even ignoring altogether education in inter-personal relationships, problem-solving, imaginative conceptualization, cross-cultural communications--all of which are vital to the design of, preparation for and redirection of careers.

One definition, for instance, purported to have sprung from a highly influential source and now providing the fundamental operational concept for many career education programs, is that career education is education for economic independence. No one derogates economic independence, of course. But as a primary aim of education, it ignores completely the emerging non-materialistic, inter-personal values of what William Glasser has called "the identity society"--those primarily concerned with the reverification of alternative human roles rather than the accumulation and consumption of material objects. Such a cross definition of career education also neglects obvious processes of cultural change involving a highly affluent and interdependent consuming capitalist society in which many are economically

independent apart from both work and education (to say nothing of gifts and talents).

Career education programs operating on the basis of this concept design their curricula to prepare for "gainful employment" and "vocational competence." If this is the height and depth and bredth of career education, then the cynicism of liberal educators in the arts and sciences is well founded, for it is indeed nothing more than vocational-technical education, and not even that in its more imaginative, forward-looking forms.

Furthermore, career education as such would never attract those among the gifted and talented who knew they had been identified as such.

Career education is not just knowing enough to get a job. It must also be knowing how to get out of a job--how to grow with a job, and how to grow from job to job, even career to career. Career education--especially for the gifted and the talented--must provide the insights necessary, not only for economic independence, but for cultural interdependence--the ability to live a personally satisfying as well as socially useful life within a variety of alternative life-styles.

It is the narrow goal of economic independence that also makes career education suspicious to the "culturally deprived" minorities. As such, career education is a new name for shunting minority youths into tracked educational schemes that lead to obsolete, low-paying jobs. Career education becomes the new "liberated" way of keeping some people in the right places, giving

them just enough of the pie of affluence to keep them fearful of losing economic headway.

Sociologists have recently made us keenly aware of the fact that those who most fear change in the status quo are not those who have a great deal to lose, but rather those who have the least to lose. Also, political scientists have pointed out how cautious, measured changes in the status quo, controlled from the top down, actually contribute to the maintenance of unequal, unjust socioeconomic conditions which minimize the self-direction of individual life and livelihood. Career education to some, not without some justification, does show signs of becoming a form of this "progressive status quo-ism" in which apparent and verbal changes--from vocation to career--actually hinders reform and the improvement of life-chances.

Depending on how career education responds to this danger, vocational educators have the least to lose or the most to gain. If career education does become no more than job training to limit the options of life-style and life-chances, vocational training along with career education will be rejected by masses of increasingly socially conscious and politically alert persons--especially the gifted and talented. On the other hand, if vocational job training succeeds in integrating with a kind of career education that places its highest values on increasing alternative pursuits--theoretical and practical, social and personal work-oriented and leisure-oriented, economic and cultural, cognitive and emotive--vocational educators as career educators will have their finest hour. And the liberal educators will be there too.

Practical Value Issues in Career Education for Gifted and Talented Persons

Gifted and talented students are not a homogenous group in terms of their intellectual performances, their creativity, or their artistic and psychomotor skills. Indeed, most gifted and talented children may be multipotential in their capability to do a wide range of tasks in a superior fashion. Others may be highly talented in a fairly clearly defined and narrow range of activity. The result is that career education needs to respond to each of these conditions. In so doing, a number of very practical value issues must be addressed.

Issue 1: Are there ideal careers for the gifted and the talented? Or is it more effective to recognize that the gifted and talented tend to create their own careers? Do they need help in considering such possibilities? At what educational point does one introduce such concepts and via what methods?

Issue 2: Can career education be kept from becoming another form of pressure on the gifted and talented to fulfill societal voids rather than their own needs? For example, the gifted or talented student is often exposed to a certain amount of pressure to specialize in specified areas: i.e., the math teachers feels the gifted student should be a mathematician, the English teacher feels he should be a writer, the chemistry teacher feels he should be a chemist, etc. How can conditions be created so that others do not encourage him to be a vicarious channel for their needs rather than his?

Issue 3: Since many of the gifted and talented can enter and proceed successfully in a large number of options, how can career education avoid underchallenging these students by unnecessarily narrowing their perspective on some careers to the exclusion of others? Vocational choice for the able youth is complicated by the many alternatives from which he often must select without adequate information about their characteristics as well as by the fact that high ability youth may feel that, because others are making their occupational choices, he must make his too.

In some instances, these youth need reassurance that there is nothing tragic

about not being able to make up one's mind at this time. They also need to understand that one learns more quickly what one does not want to, than what one does want to do (Gowan and Demos, 1964).

Issue 4: How much of career education for the gifted and talented is parent education? How does career education include a provision for parents, particularly the poor and the disadvantaged, to consider the concept of career for their children? How can certain stereotypes about the gifted and talented be corrected: e.g., they are frail, bookish, non-athletic, etc.?

It is reasonably clear, for example, that stereotyped role choices determined by gender hinder creative potential. Krippner and Blickenstoff have shown this to operate in comparing males and females against vocational interests categorized as scientific or artistic in which sex-typing clearly occurred (e.g., boys, scientific; girls, artistic). It was found that participation in a workshop designed to loosen conditional ways of perceiving the world by means of a multisensory experience and introspection tasks did effect change in such stereotypes.

At another level, Torrance (1971) has raised the question, "Is bias against job changing bias against giftedness?" He contends that the results of his studies show that creative and gifted young people are discriminated against when they are denied employment and promotions on the basis of the fact that they have made frequent job changes during the early stages of their career. He maintains that gifted young people perhaps have a stronger need to make job changes in their search for identity than do their less gifted and creative counterparts.

Issue 5: What are the manpower implications of releasing the potential of the gifted and talented? Will this result in moving the nation closer to a meritocracy? How can such political possibilities be accommodated?

Issue 6: How can education for careers take account of plurality and unity, equality and difference, similarities and differences in ways responsive to the leadership potentiality which resides in the gifted and talented? For example, it is likely that the student with ability and a wide interest pattern may find it diffi-

cult to remain interested in only one field of study. In terms of educational or vocational development the gifted may be somewhat fickle.

Issue 7: Can education adopt the diverse modes required to respond to the needs of the gifted and talented to be identified, assisted to develop and evaluate preferences, and act upon the preparation patterms by which preferences can be converted into reality? In particular, the guidance of those who show high interest or talent in art and music is a difficult one in our society. The problem is not so much one of education as it is of a culture which does not offer enough outlets for these interests.

Career education responses to the gifted and talented must include both developmental and reinforcement emphases. In other words, it is not sufficient to simply applaud those whose gifts or talents are obvious or already highly developed. It is also necessary to arrange the conditions by which the gifted and talented can be found or by which gifts and talents can be provided the stimulus to emerge. We are talking here, on the one hand, of a "mining" operation designed to identify those whose rare qualities are apparent given the capability of various assessment procedures and, on the other, a "farming" operation designed to nurture and develop those with potentialities for gifted or talented performance. Since the capabilities of schools differ with respect to responding in these ways, it is necessary to consider the types of alternatives which exist. These might include programs centered in the school as well as those centered in the community or programs which bridge both; programs dealing with special talent -- music, art, drama, etc.; programs concerned with providing wide varieties of exploratory experience; and special guidance programs.

What is required, in essence, is a taxonomy of possible career education responses to the gifted and talented to which program planners can relate their local characteristics and from which they can extract possible options. The major dimensions appropriate to classifying them needs some attention. The following represent a suggested set of questions which could serve such classification purposes. They include:

1. By whom initiated (e.g., special interest group, curriculum director, counselor, etc.)?

2. Is the program part of the educational offering of the school system or is it community-based?
3. What are its funding sources (e.g., taxes, foundations, donations)?
4. What are the assumptions underlying the program?
5. Are objectives for students identified? What are they?
6. What is the proportion of the student population included?
7. Are students recruited or are they volunteers?
8. What instruments or techniques are used to identify appropriate students?
9. What is the content of the program (e.g., music, art, career development)?
10. What evaluative information is available?

It can be readily seen that, at an operational level, answers to each of the ten questions formulated above would provide a basis for viewing the value systems of the program's organizers as well as a description of the program itself. The role of values in the operation of career education programs for the gifted and talented is both obvious and crucial.

Additional Comments of Seminar Members

Preceding portions of this chapter have clearly illustrated the fact that a variety of ways exist for considering value questions concerning career education for gifted and talented persons. As a final portion of this chapter, an attempt will be made to capture some of the additional ways in which questions of values were considered by seminar members. While these questions came from a number of seminar members, special note should be made of the contributions of Dr. David C. MacMichael, Stanford Research Institute.

Question 1: What should be the relative importance of career education among the objectives of education for the gifted and talented? Where does "education as preparation for work" rank among the objectives of education for gifted and talented persons? This obviously relates to the broader questions of whether or not objectives of education for gifted and talented persons differ in nature, and in their relative rankings of importance, from objectives of education for remaining portions of the

population. This obviously relates to the "work vs. play" issue raised in Chapter VI. It also relates to questions such as: a) What is the meaning of "work" for the gifted and talented? b) Why does society concern itself with making any special provisions for the gifted and talented? and c) What is the relationship of career education for the gifted and talented to their total educational program?

Consensus, in the form of a clear-cut majority opinion among seminar members, was not present in terms of a single answer to this or to any other value question raised during the seminar. Opinions of seminar members ranged all the way from those who would assign "career education" a very low priority to those who thought it deserved top priority among objectives of education for gifted and talented persons. If anything approaching "consensus" was reached, it appeared to be in the form of recongizing that educational objectives for gifted and talented persons are, and should, be determined, to a significant degree, by the person himself. That is, educational objectives should not be imposed, as a single set, by the educational establishment on the gifted and talented as a "class" of persons. If one talented person chooses to use her talents in the work that she does and a second person chooses to use his talents in play, the first person cannot automatically be said to have "better" education objectives than the second.

Question 2: On what basis do we consider the allocation of resources for career education of the gifted and talented? Should a special portion of the career education budget (if one exists) be set aside for use with the gifted and talented? Of those to be served by career education, are the gifted and talented of such special importance that they deserve a relatively greater portion of career education funds than is allocated for use with other persons?

It was observed that, when, in December, 1972, directors of Part D exemplary career education programs were asked, during a national conference, for reports of ways in which they were making special provision for gifted and talented students, no specific reports of any special activities were received. It is obvious that, in the case of the gifted and talented, if we were to follow through with seminar recom-

mendations such as assuring them contact, on a one-to-one basis, with gifted or talented adults employed in their tentative areas of occupational choice, special, and in some cases very expensive, provisions would have to be made. One seminar member reported a special project under which 40 gifted youth were provided an opportunity to work with a group of archeologists during the summer in exploring the underwater remains of Sparta. This is but one example of special provisions in career education for such persons. Is it realistic to expect that such special provisions will become common? If so, who should pay for it?

It was the feeling of some seminar members that, realistically, programs both for the gifted and programs for career education can be expected to "fly" only if they can be organized so as to employ tax levies. Others pointed to the possibility that we may be speaking primarily only of a re-ordering of educational priorities -- e.g., many school sys ems now spend more providing football shoes for students than they do on their entire program for gifted and talented students! Other pointed out that, so long as no new personnel or physical facilities are required, career education programs and programs for the gifted and talented will not, in fact, cost much money. This was countered by another seminar member who observed that programs for the gifted and talented are currently effective in the ten states who now employ a specialist in education of the gifted and talented in their state department of education.

Still others observed that, to date, the major financial burdens of the career education movement have been borne by vocational education funds. They argued that, unless there was some way to assure that some gifted and talented persons are likely to enroll in vocational education programs, it would be difficult to justify using vocational education funds to support special career education programs for gifted and talented students.

Question 3: Who should work with gifted and talented students in career education? This question was raised primarily with respect to the topic of the "talented" as opposed to the "gifted". Those seminar members possessing the greatest amount of experience in working with gifted and talented persons in career development and

career decision-making seemed to be in agreement that gifted and talented adults in specific occupational specialties are essential factors in career education programs for gifted and talented students. Others seemed to feel that the gifted and talented are capable of learning what they have to know whether or not they are put in contact with such persons.

Question 4: Might we not be in the process of underchallenging very bright and able minds by not encouraging them to enter areas where the greatest intellectual challenges lie? This, of course, relates to value questions regarding the degree of freedom to make career decisions that society wants to allocate to its most gifted and talented members. It also relates, particularly in the case of the disadvantaged gifted person, to value questions related to societal responsibilities for allowing such persons to become aware of and take advantage of the fullest possible range of opportunities the total society has to offer.

Question 5: How threatening would it be to the current power structure to identify and develop the nonconforming gifted student who might, if allowed to fully develop, take over the power structure and change it to his liking? It was pointed out, by some seminar members, that, in a sense, it represents no societal threat to identify and develop a talented person (e.g., a Joe Namath) because he is not likely to use his talent in an attempt to change the total society, but that it could be quite a different matter in the case of the nonconforming, truly gifted person. Other seminar members reacted by pointing out that full development of an intellectually gifted individual requires many years of what can only be regarded as very conforming behavior in the classroom through the public schools, the undergraduate years, and on through advanced graduate study. It was also pointed out that, in the case of such conforming gifted persons, they are likely to do a very great deal later in life to control the destinies of other persons -- including those nonconforming gifted persons who were unwilling to play the "academic game".

Question 6: Who is to judge the conditions under which a gifted or talented person can derive satisfaction from his work? One seminar member, in commenting on

value implications of this question, observed that it is entirely possible to conceive of a gifted person working on an assembly line who might, in terms of his personal value system, derive great personal satisfaction from his work. Others, while unwilling to concede that specific possibility, were quick to point out that the economic rewards of work may very well be a very small part of the importance of career education to the gifted or talented person.

Question 7: Why talk about a career education objective as one concerned with "bringing personal happiness and meaning to individual lives"? This question was accompanied by a comment that life is pretty much a "vale of tears" for most persons; that only occasionally can they stop to "wring out their socks;" but most of the time they are just "sloshing along". Others pointed out that, if we refused to talk about the "personal happiness and meaning" phase of career education, we would be reduced to conceptualizing it primarily on the basis of societal, rather than individual, need.

Question 8: Is career education especially needed for the gifted and talented because, after finding self-fulfillment through higher education, so many cannot seem to find socioeconomic success? The current presence of highly gifted persons, from upper middle class backgrounds, who are now residing in communal settings in rural West Virginia was cited as one example of the kind of problem that prompted this question. Others pointed to difficulties gifted persons encounter when competing with others in settings where their giftedness does not automatically place them in a favored position. If a "consensus" could be said to be present among seminar members with respect to this question, it appears to be in the form of a "No" response to the question as stated. Most seminar members seemed very convinced that the gifted and talented, by and large, have amply demonstrated their ability to attain a degree of socioeconomic success consistent with their personal value systems and that to attempt to justify a career education effort on the assumption that they have not would be fallacious.

Concluding Statement

This chapter, in addition to serving a supplemental purpose to the discussion of

basic values contained in Chapter VI, has attempted to illustrate the wide range of value issues with respect to career education for the gifted and talented that arose during the course of our seminars. They are presented here as illustrations of the kinds of value questions that those concerned with this topic must face as they plan and implement career education programs for gifted and talented persons.

We have made no attempt here to come to a firm or final resolution to any of these value questions. We do not consider it either possible or appropriate that we attempt to do so. The expression of personal biases is evident in other chapters of this book. It has no place when values themselves are the topic of discussion.

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Section D: Exemplary Programs in Career Education for the Gifted and Talented

Chapter VIII -- Exemplary Programs in Career Education for Gifted and Talented Students

Chapter VIII

EXEMPLARY PROGRAMS OF CAREER EDUCATION FOR THE GIFTED AND TALENTED

Efforts to locate Career Education Program for the Gifted and Talented have for the most part been unrewarding. The United States Office of Education, leading experts in the fields of both career education and the gifted, bibliographic references, state and local education authorities, and individual educators have all been consulted with frustrating results.

A careful examination of the literature collected and the information gathered reveals a wide diversity of types of programs within the broad category of vocational programs, career programs, or work-experience programs but few of these are concerned especially with the superior student. In addition, difficulties exist with the varying definitions of career education, talented, and gifted.

The evident paucity of functioning programs underscores the need that exists for coordinated and intelligent effort in this field. The fragmentation of past efforts and the number of instances of "one-time" programs which seemingly produce no lasting results alarm the researchers and the local curriculum developers as well. Even well constructed, thoughtful, and carefully evaluated programs funded by the United States Office of Education end with little having been accomplished for continuing curricular implementation.

The programs which are described herein are exemplary in the fact that they are samples of what is or has existed. The models they offer are valuable for revealing difficulties as well as advantages. The tendency for local school education authorities to fill in a survey merely

checking that they provide programs through regular channels because teachers are now "taking care of individual differences" does occur and often distorts attempts to ascertain the existence of programs.

Assessment of the apparent motivation for the development of a program indicates that efforts have been expended by specialists in both career education and gifted education separately, but few examples could be located with both areas combined. More examples were discerned within the broad spectrum of guidance activities related to career education for the gifted. However, the majority of these operated mainly within the framework of college choices. Talent as related to the field of fine arts has been more regularly developed by special programs which were concerned with career education, but by their very nature, these narrowed the scope of choice to within the particular field of arts.

The wide diversity of existing programs reveal little similarity in objectives, assumptions, or populations. However, generally speaking, more programs exist for the high school gifted student than any other age. Equally notable is the fact that the majority of programs, particularly in the arts and sciences, have been oriented in the university atmosphere. Younger populations have more often been identified in music. Funding is as diverse as the programs and often the controlling factor in the continuation of the programs.

Evidently, very little has actually been accomplished which could be described as a permeating career education focus for the gifted and talented which would accompany general education K-12.

The programs selected to be described include an example of an early effort of a traditional vocational unit redirected to meet the

needs of the gifted, programs in arts and sciences for talented students, programs related somewhat to giftedness and career education but not identified as such by their developers, and programs identified by their developers as career education for the gifted.

Wherever possible the following format was used: the development of the program; a description of the population, content, and special features; the hypotheses and objectives of the program; assessment procedures; present status; and future plans.

A JUNIOR HIGH VOCATIONAL UNIT
[Changing Career Aspirations of Intellectually Superior Students]

One program which should be considered a pioneer in career education for the gifted is the one developed by Dr. Elizabeth Drews at Michigan State University during the early sixties. It was a traditional ninth grade vocational unit in social studies developed for a selected population in the public school of Lansing, Michigan.

The impetus for the study came from the concern of counselors and teachers who sought to help students discover themselves, become cognizant of the multiple possibilities in the world, and develop bases for making decisions as they continue in school and as they plan for the future. Drews had conducted an earlier study of gifted adolescents, their guidance and grouping. She said, "From our survey, we concluded that educational programs are not generally designed to help students think logically or to make them maximally responsive to the world and its possibilities."[1] The earlier study had indicated that able students wanted more intellectual stimulation, more opportunity for selfdirection, and more occasions when they might have philosophical discussions. In comparing these gifted adolescents with

creative adults, she found a surprising congruence in attitudes, values, and interests. Therefore, the aim of Changing Career Aspirations of Intellectually Superior Students was to create an environment which would foster predispositions to creative, intellectual, and moral development.

The project was developed by collaboration between the director, a school-based committee, and the students involved. Developers of the curriculum at the university level not only helped design the training program but continued to meet with the teachers on matters of instruction and content revision. Funding came from the U. S. Office of Education for the development of materials and the leadership, but the teacher's salaries were paid by the local school district.

The subjects in the study were 240 ninth graders who were randomly assigned to four junior high school teachers each in a different school. The average IQ of both groups was between 120 and 125. Each teacher taught four experimental and four control groups an eight week vocational unit.

The curriculum for the experimental training program did not entirely discard the traditional program on careers, but it moved away from the typical career emphasis toward the introduction of intellectual disciplines and creative styles of thought and living.

The curricular design group hypothesized that a ninth grade career-social studies course utilizing special materials and special teaching methods would increase the students' selfawareness and an openness to the outside world and its multiple possibilities. They posed these additional questions: Will there be an increased awareness and acceptance of the diversity of occupational and life style and a recognition of the importance of the formulated philosophy -

particularly as they apply in creative intellectual areas? Will there be an increase in the desire to take social responsibility and to deal with moral and ethical problems?

The aim of the eight-week course was for each student to meet great ideas and outstanding people through various avenues and media. Principal objectives of the project were to develop films of creative adults and an accompanying text to study classroom use of these materials, and to assess student change.

A special feature of the program was the Being and Becoming Film Series developed by Dr. Drews and her coworkers. The films were thirty minutes in length and each pictured a contemporary man or woman who was creative, scholarly, and had deep social concern. "The theme of an individual shaping a meaningful existence in a complex world was recurrent and was translated for a young audience as meaning that each individual must work out a unity between his personal development and the human milieu or heritage."[2] Subjects included a historian and museum director, an artist, a physician, a singer, a philosopher and anthropologist, a woman social scientist, an educator and philosopher interested in world peace, human welfare and the arts.

Another vehicle of ideas was the Four Worlds Textbook which presented ancient and current quotations in looseleaf format organized to help students see that certain basic unities were compatible with the diversity of ideas they were encountering. The four worlds were: the natural, the aesthetic, the technological, and the human. The format allowed space for students to make their own additions as "marginalia".

The propositions which underlie the program are:

(a) Each student must develop an identity (discover a place for himself in the world). He must see this program of "becoming" as a central purpose of education.

(b) Each student must take responsibility for his own education, his own acts, and his own statements.

(c) Each student should come to view education as a continual and integral part of living.

(d) Each student must see education, knowledge and himself as "open systems".[3]

Several tests concerned with attitudes, interests and values were administered to the experimental and control groups in the pre and post-test forms. Instruments showed a definite and measurable change of attitudes. At the post-test level distinct sex differences in reaction to the program were noted. No differences were noted for boys on the Omnibus Personality Inventory, but the girls of the experimental group improved considerably in areas of aestheticism, theoretical orientation, and thinking introversion. On the Alport-Vernon-Lindzey Scale of Values the boys showed a significant increase in the theoretical dimension while the girls showed a significant increase in the area of aesthetic development. Both boys and girls made a significant gain on the Critical Thinking Test. None of these changes was registered in the control group.

Follow-up assessment a year later revealed that not only did the gains noted above remain with some increase, but there was a marked change in the attitudes tested for the control group due to the free exchange of deas between experimental and control students who were now scheduled into the same classes.

For two years following the completion of these studies an effort was made to work out a plan so that the films and materials could continue to be used. Unfortunately, these efforts were not successful and thus the curricular development and the program ended with the United States Office of Education project in 1964.

PROGRAMS IN ARTS AND SCIENCES

Generally speaking, programs in arts and sciences, particularly the arts, have attempted to recognize talented students at the secondary level. New York City first established Stuyvesant High as a specialized high school in the 1930's, followed by the High School of Music and Art, the High School of Performing Arts, and the Bronx High School of Science. While a significant porportion of the graduates of these schools did pursue careers in the specialized areas, a concommitant aim in providing such a specialized background is to promote students' understanding for this area in general. Such programs are probably possible only in large metropolitan areas. Few public school systems have followed this practice of establishing separate specialized schools, but a number of school systems, universities, and community organizations have made attempts to provide specialized training for talented students. Examples of these follow.

Workshops for Careers in the Arts

The Workshops for Careers in the Arts in Washington, D. C., originated with an Arts Festival in the summer of 1968. The program was soon extended to a partial day operation during the school year with approximately one hundred students participating in one of four areas of specialization: visual arts, dance, drama, or filmmaking. George

Washington University sponsors the workshops with funding from District of Columbia Public Schools, local foundations, and the Ford Foundation.

Students in junior and senior high school may apply. Selections are based upon academic aptitude, audition, and interview. Once accepted, a student will participate each summer and approximately three hours daily during the school year in courses in his chosen area of specialization under the tutelage of a performing professional. The rest of a student's academic education will occur in his regular school.

The goal of WCA is to equip each student with the skills and confidence needed to pursue an arts career. The program is based on the assumption that sharing through the arts is a meaningful way to humanize the collective spirit of the city and that such humanization will help rebuild the city of Washington, D. C.

According to WCA publications, all of the graduates of the program have been accepted in advanced schools from Juliard to Yale. Miss Peggy Cooper, a young lawyer who is responsible for the original program and who remains its developer, hopes to see it evolve into a public high school for the arts.

Interlochen Center for the Arts

Another variation of music and arts specialization is the Interlochen Center for the Arts which is affiliated with the University of Michigan. This program also originated with a summer program, the National Music Camp. Beginning in 1938 under the leadership of the last Joseph Maddy, the National Music Camp is still held each summer in collaboration with the University of Michigan. This program trains about 1,500 students from the United States and around the world in an

eight week residential camp which provides specialized training in music, art, dance, theatre arts, and broadcasting as well as opportunities for participation in recitals, concerts, plays, and dance programs. The camp has four divisions which service students from age eight through college.

In 1962 the Interlochen Arts Academy was established as a private residential school. Its aim was quality pre-professional training for highly talented young students in the arts, and to provide an atmosphere of culture along with accredited college preparatory academic studies designed to prepare each student for the kind of life he or she expects to lead. Students are able to concentrate for longer periods of time, to move ahead without regard to age, to compete with other highly motivated students, and to help plan their education. They are in constant contact with artist-teachers and an academic faculty of skilled educators. Guest artists and lecturers are frequently brought to the campus to further enrich its cultural atmosphere.

The Academy, under the leadership of President Roger E. Jacobi and Director Don Th. Jaeger, enrolls approximately 350 students in grades nine through twelve who are interested in studying one or more of the fine arts (art, dance, drama, and music) and who plan to attend colleges, universities or other professional schools. The academy has a selective admissions policy. Five criteria are used to determine admissibility: past school achievement; nationally standardized aptitude and achievement test scores; recommendations concerning citizenship, attitudes and self discipline; interest, talent, or experience in one or more fine arts areas; and physical and mental health.

Fundamental precepts of both the National Music Camp and the Interlochen Arts Academy are competition, dedication, and integrity. The Academy is based upon the assumption that better education for highly talented students can occur in a community of creative people. The Director, Don Th. Jaeger, describes Interlochen as "a concerned environment which strives to ensure every student the privilege of exploring his own mind for the answers to any subject he may find of interest to him."

Fundamental to this philosophy is the belief that sound training and discipline in the arts, in addition to developing excellent artists, builds the qualities of character, judgement, insight and sensitivity so important to good citizenship and a rewarding life in any vocation.

It is anticipated that eventually a full four year College of Creative Arts will be established at the Interlochen Center for the Arts.

District of Columbia, Youth Orchestra Program

The D. C. Youth Orchestra Program began in 1961 with two staff members, a conductor for the youth orchestra and an instructor for a chamber orchestra. It operated from 1962 to 1966 with volunteer teachers. Since 1966 the public school has gradually assumed some of the financial responsibility for the program. The orchestra's current home-base is Coolidge High School in the District of Columbia. Presently the District of Columbia Public Schools provides salaries for the teaching staff. However, a very active parent-support group has actually provided most of the funding for offices, music, concert expenses, and trips to festivals.

Over 600 students take advantage of this specialized training by performing musicians with classes in the Junior Orchestra beginning at

the fourth grade level and continuing through high school with the advancement to the Youth Orchestra. The aim of the program is to provide free instruction in instrumental music by specialized teachers and a broad spectrum of ensemble training and experience at all levels of development, with flexibility for advancement based on ability without regard for age or grade level.

Instruction and ensemble experiences are provided on Saturday mornings with additional evening rehearsals. Besides individual and small group instruction, the program provides ensemble training in elementary orchestra, elementary band, junior orchestra, junior band, senior wind ensemble, and senior youth orchestra, with coaching for small chamber ensembles. Instruments included are all strings, woodwinds, horns, brass, and percussion.

Students sample a wide-range of musical repertoire, have ample opportunity for performance, and experience a variety of ensemble playing. Noteworthy aspects of the program are the low student-teacher ratio which sustains and stimulates the interest of the student with a resultant high percentage of enrollees remaining in the program from 4th to 12th grade and a cultivation of strong parent-teacher relationship for maximum support to students in choice of private teacher, instrument, and counseling for career orientation. The orchestra has been chosen by U. S. Department of Health, Education, and Welfare as a model youth orchestra to be studied by educational experts with the view to instituting similar programs in other cities. In 1970 and 1972 the Orchestra performed in the International Festivals of Youth Orchestras in Switzerland and Berlin.

The D. C. Youth Orchestra Program was built on recognition that

proper instrumental instruction was not readily available within the framework of public school music education and that, therefore, performing orchestras, bands and ensembles could not be developed.

No systematic assessment of the total program was described in the literature. A pilot study for incorporation of the program into the regular school curriculum has begun this year. The ultimate goal is to incorporate the out-of-school program into the school structure allowing time and credit for course work. Such incorporation with full support and budget from the public school system has been proposed.

Summer Programs in Science Career Exploration

Sporadic efforts at providing exploratory experiences in science were located through an ERIC search.

A study at Harvard in 1960 evaluated a summer program in science and mathematics for 60 promising science students and determined the effects of such a program on performance in class during the ensuing school year as well as on future career decisions. The program consisted of two weeks of advanced instruction by visiting scientists and Thayer Academy personnel followed by eight weeks of experience in separate university and industrial laboratories under the direct guidance of a research scientist and under periodic supervision of Thayer personnel. Assessment indicates that as a career guidance device, the program was highly successful.

In 1964 Miami University in Coral Gables, Florida, developed a summer program for specially selected seventh grade students which utilized BSCS, CHEMS, PSSC, and a newly designed laboratory orientation course. The curricula were presented in successive summers

to the experimental group. Comparisons were made with a control group who took the curricula in the 10th, 11th, and 12th grades. Participants scored more favorably on national tests than national controls and performed satisfactorily compared with the controls who took the regular academic program in 10th, 11th, and 12th grades. Results of the California Occupational Interest Inventory revealed a significant increase in the difference between experimental and matched control students in the personal-social factor.

Research Participation Program

Dr. Leo Schubert directs the Research Participation Program at the American University each summer. An outgrowth of a program Dr. Schubert started fourteen years ago at National Institute of Health, the program is now funded by National Science Foundation, a contract from the Goddard Space Flight Center, NASA, the U. S. Department of Agriculture, and by contributions from various scientific organizations.

Applications are taken from high ability students in the eleventh grade who are able to commute to the participating laboratories in the Washington, D. C., metropolitan area. Usually about 115 students are selected by a screening process which is jointly administered by University and participating laboratory representatives. Use is made of the following information: test scores, grades, teacher recommendations, and two essays explaining why the student wishes to participate in this particular project, and what the student has done or is doing to prepare himself for the future.

Selected students spend one day in orientation at the American University. Then each student reports to the individual laboratory to

which he has been assigned to work for eight weeks. Students report back to the American University at the end of the experiences for a day of evaluative seminars. The students do not receive pay; however, a small sum is given to help cover transportation expenses and lunches.

During this work period the student is assigned to a sponsoring scientist and also receives regular visits from the Associate Director of the program, Mrs. Margaret Maury.

At least one publication has resulted from the summer research of one young girl and another NASA paper has resulted from a group of students. Several of the students have have been employed for after school work during the school year following participation in the summer program.

Academic Year Research Placement Program

Springbrook High School in Silver Spring, Maryland, has established an Academic Year Research Placement Program which places students in research laboratories during the academic year. Present placements are at the Institute of Behavior Research, a division of the National Institute of Mental Health, Goddard Space Flight Center, and the National Institute of Health. In addition, placements are presently being arranged at the U. S. Department of Agriculture and the University of Maryland. The program will train about 20 students this year.

The criteria for selection of student participants include: (1) student expressed interest, (2) evidenced level of maturity, dependability and willingness to accept responsibility, (3) evidenced achievement in science and, (4) indicated potential or aptitude. The

science department has found that careful selection of students has resulted in the participating scientist being willing to accept more students and to widen their projects.

The school administration and guidance cooperate in planning a schedule so that most students are released from part of the regular school day. The students are enrolled in astronomy, advanced biology, advanced chemistry, or physics and/or are scheduled as laboratory assistants in the science department. Participants are scheduled for a minimum of two days per week, three hours per day, to a maximum of three or four hours per day. The students receive partial academic credit for the research experience. Student participants are expected to report orally to various classes and to submit written presentations of their activities. In some instances, conferences with cooperating scientists provide additional evidence as to student achievement in reference to evaluation for academic credit.

The program is based on the assumptions that such a program is valuable because of the dynamic nature of career opportunities and choices and the necessity of specialization in our present sociological structure. The originator of the program, James Collier, the resource teacher of the science department, feels, "It is most desirable that a student have some experience in his or her anticipated career prior to college to determine compatibility with real and functional situations prior to four or more years of commitment and preparation.

The administration and the science department have been most gratified with the program and enthusiastically anticipate continuation and expansion of this program.

RELATED PROGRAMS

California Project TALENT Demonstration Centers

Project TALENT of the California State Department of Education has six school-based centers. The funding for the centers is provided by grants from the U. S. Office of Education. The students involved represent the upper two percent of mental abilities at grades four, five, and six; they were identified via standardized tests and behavior ratings. The course content is aimed at reflective thinking, problem solving, critical thinking and creative thinking applied to the substantive content of diverse subject matter fields. Vocational skill training and career development broadly conceived are included. Evaluative data are available from U. S. Office of Education.

Project Opportunity

This program was initiated by a group of admission officers in cooperation with College Entrance Examination Board. The program exists in eleven centers in eight Southern states. Funding comes from Ford Foundation and is administered by the Southern Association of Colleges and Schools. Project opportunity exists to establish a highly personal guidance program over a long-term period in order to develop the potential of forty to fifty seventh and eighth grade students from minority or poverty groups at each center.

Identification of students occurs via standardized test scores, previous academic records, and teacher recommendations. The career development program seems to provide special enrichment, vocational skill training broadly defined, and contributions from the community. Of the first 417 project students graduating from high school, 85 percent attended some form of post-secondary educational program. In the fall of 1970, 321 students had entered college and all who needed financial aid had been successful in obtaining sufficient funds to enable them to attend.

Children's Theater

Quincy, Illinois, parent initiated a community-based program which promotes further training for students with dramatic ability. The identification is made by interviews and observations. Instruction is given in all areas of dramatics.

Exploration Scholarship

This summer program was initiated by the Explorer's Club. It has an international base with funding from the Explorer's Club, Education Expeditions International, and the Bureau of Indian Affairs, and the U. S. Office of Interior.

Forty-three students were selected for 1972 and seventy-five for the summer of 1973 on the basis of demonstrated competence and potential for successful careers in the natural sciences, evidence of good health, recommendations, a brief essay, and financial need.

Students are offered on site participation in archeological, geological-ecological, vocanological, glaciological, and ortheiological expeditions. Some vocational skill training is included as well as career development. No means of evaluation was evident in the literature.

SELECTED PROGRAMS IN CAREER EDUCATION FOR GIFTED AND TALENTED

The Lincoln School for Disadvantaged Gifted Students
Simpsonville, Kentucky

The Lincoln School came into existence on the basis of Legislative Act of the State of Kentucky in 1966. According to plan, the

University of Kentucky had the school ready to receive students in September 1967. The school ran from then until 1970 and is now defunct due to being abolished by the 1969 Kentucky legislature.

Approximately 120 students were enrolled in a four year residential high school. Students were selected on the criteria of being basically disadvantaged in one or more of several areas and having high intellectual and academic potential. The population served included black, white, appalachian, urban and farm as well as those disadvantaged by economic deprivation, alcholic or mentally ill parents, or missing adults.

The standard high school courses formed the content but they were taught to small groups with some aspects integrated with residential and extra-curricular efforts. Education occured 24 hours daily with intensive guidance and counseling. Some college courses were offered in conjunction with local post-secondar- institutions. While no specific title was given to career education, this total effort was aimed at raising career sights. The uniquesness of this program limits the description of its special features. The reason for its abolishment is unclear to the authors.

The underlying assumption of the Lincoln School was that a total quality high school program in a residential setting would have sufficient impact to offer a superior education to gifted youngsters from disadvantaged backgrounds. The second assumption was that career and post secondary aims would be altered.

Four major objectives were identified which were:

1. To maintain standards of academic excellence high enough to ensure its students success in the most selective post-secondary school
2. To provide a continuous academic remediation program as a part of the program to offset the artificial limit on talents
3. To aid in generating new knowledge relative to the education of disadvantaged and gifted youth
4. To serve as a demonstration facility for the educational community.

While the school was functioning, continuous data gathering - both objective and subjective - occured relative to course content and personal information. No follow-up studies were available.

No present plans exist for such a school. However, it director, Marvin Gold, offers this quote:

"It is not possible to estimate accurately the amount of unawakened and unrecognized potential loss each year. Joseph H. Douglass (1969), Staff Director of the 1970 White House Conference on Children and Youth, recently estimated that some 80,000 of the youth who drop out each year have I.Q.'s within the top 25% of the population - that is, 110 or better. He also estimated that this potential will never be tapped and will be irretrievably lost. Douglass also reported that very few school systems throughout the country have instituted p-ograms for the identification of the talented and that there is no follow through in the few programs that have been initi-

ated. He reports further that programs for the retrieval of talent among the disadvantaged are practically nonexistent. Douglass further challenges that 'no satisfactory method yet has been devised to discover or predict talent potential among individuals who, for economic and cultural reasons are not in the mainstream of American life'."[4]

Research and Guidance Laboratory for Superior Students

The Research and Guidance Laboratory for Superior Students began in 1957 at the University of Wisconsin to conduct longitudinal research through service for superior high school students. Though it began as a small cooperative project within the University of Wisconsin's School of Education and College of Engineering, it is now an agency of the University of Wisconsin governed by an advisory committee. Extension branches now exist. One sixth of the public high schools in Wisconsin, 75 schools, are participants in the program. For the first 3 years of the program, it was totally supported by the University. Since then participating schools fund 20% through fees and small grants from United States Office of Education with the University contributing the rest. Dr. M. P. Sanborn is the director of this program.

Students from participating schools are selected each year from ninth-grade classes by their teachers and counselors. The Laboratory adopted the policy of encouraging schools to utilize their own selection procedures through a wide variety of criteria used by those who know students best - their teachers. Due to this policy, the variation among populations from which students are selected, and the uniqueness of individual characteristics, the Laboratory population consists of a wide range of characteristics among students. However, their

average scores are above the 95th percentile on such tests as SCAT and AAT. The student participants number 450 a year, now giving a longitudinal count of 3,000 with the oldest ones presently eleven years out of high school.

This is primarily a guidance and counseling program designed to help participants discover information about themselves and their environment that may be imparted to them in making present and future decisions. Such information is shared with their teachers and counselors. Information is gathered during a full day's stint each year at the University during which the students have a variety of experiences including writing essays and autobiographies; attending or visiting classes, studios or laboratories; interviewing faculty members in fields of their interest; and completing tests, inventories and other personal data. The day's experience ends with a Laboratory counselor and the student having a conference relative to the day. A Laboratory report is sent to the principal for each student. Each school is expected to utilize these data in a counseling practice.

The longitudinal aspect of the program and the length of its existence bring uniqueness to it. Another special feature is the teamwork among university, local school, student, and parent. The funding from the University of Wisconsin is different from any other program since it is a line item by virtue of permanent donations from engineering, education, business, and liberal arts.

The program operates on the following assumptions:

1. To educate an unusual child, schools must do unusual things.
2. Every school has some gifted and talented students.

3. The best avenue to appropriate education of a unique individual is to get to know the individual well, and then act as if we know him.
4. Education of the gifted and talented is a state and national concern but a local responsibility.

The Laboratory by research-through-service hopes to improve the methods of identifying gifted and talented, to demonstrate guidance, counseling, and education procedures for those people working in schools with gifted and talented, to stimulate change and innovation in schools, and to aid in the educational and vocational development of the participating superior students.

In such a project as the Research and Guidance Laboratory assessment procedures are built in and on-going. Over ninety research studies are completed and assessment of specific procedures are conducted every two years on all previous high school students who participated. This is planned to continue through the twentieth year if funding holds. Naturally, revision is also an ongoing procedure through ideas and feedback of Laboratory staff, local school faculties, and students. Much evidence exists of this project fulfilling objectives and helping in the career choices of superior students.

In addition to the future plans inherent within the total framework, the Laboratory is now establishing some schools on a K-12 basis and is focusing on better research and development among minority cultures in Wisconsin particularly among blacks and American Indians.

Career House

Career House is an co-ed residential and educational facility

for bright underachieving post-high school youth which operates in Devon, Pennsylvania. This program was developed as a private residential program to provide an intimate transitional environment between college and residence. Its support comes entirely from student tuitions. It operates in collaboration with several local colleges and career training schools.

The enrollment is limited to twenty students. The students are intellectually bright high school graduating seniors, age 17-21, with problems of underachievement and/or personal adjustment who have been unable to make use of their potential. All students must agree to involvement in the Career House and the planning of the actual program is joint between faculty and student.

The program is an all-inclusive one geared to the individual needs of the student-resident. It includes a study skills improvement program, vocational counseling and guidance, career planning,, individualized recreation profiles and work experience. There is an active program of individual and group counseling and psychotherapy and supportive therapeutic services.

The Career House objectives are to serve as a transitional residential facility which will provide educational and psychological support for the adolescent who reflects academic achievement inconsistent with his level of ability and who has the intellectual potential for education and training beyond high school. It aims to provide a learning climate in which the student can grow in self-awareness, independence, responsibility and personal goal-setting.

No assessment procedures are described in the literature, but Career House does provide supportive followup which will provide the

mechanism for evaluation.

Career Education for College Bound

A program of career education for college bound student was developed by Frank Carricato, principal of Winston Churchill High School in Montgomery County, Maryland because of student requests, his own initiative, and available funding (federal 80%, local 20%). This program was totally developed at the local level using both student and community involvement and was piloted for the school year 1972-73. This pilot effort was designed primarily to initiate the development of programs and materials, rather than to focus only on the effect on participating students.

The target population includes all students within the high school which is described as a "college preparatory oriented high school" of grades 10, 11 and 12. No selection of students occurs as all tenth graders receive orientation regarding the program through small group seminars during school hours. Eleventh and twelth grade students can elect to be involved on individual request. Students may also volunteer to be involved for career counseling, internships, and seminar programs.

The content includes:

1. Nine-week mini-courses in
   a. Television and Communication Arts
   b. Marine Science
   c. Ecology
2. People, places and thing schematics to illustrate possible methods to organize personal decision making regarding career choices.

3. Individual counseling by teachers relative to curricular and internship choices in a career education office.

Special features of the program listed by the developer include the use of teachers from various disciplines to serve as career advisors; greater use of learning opportunities present in the community as an integral part of the school program; and the involvement of staff, students, and parents in the planning and implementation.

The basic assumptions inherent within this effort were three. These are that:

1. The refocusing of curriculum upon a career development direction would assist students to better identify the learning process as a relevant life experience.

2. The development of a more flexible career oriented curriculum would encourage greater numbers of students to structure a program of studies which would be more meaningful and stimulating to the individual.

3. The activities designed to assist student to develop increased self-awareness and career awareness would help to minimize the lack of direction felt by many students.

The stated objectives of the program were in terms of accomplishments of the developers. These were to develop nine-week career cluster curricular packages in selected areas, to develop schematics to assist students to visualize the type of curricular and work experiences relative to many types of careers, to develop a career counseling service, and to develop a community resource bank.

Since the program is still in its initial year, no evaluative

results are available. However, immediate and long range assessment procedures are planned. Attitudinal studies of participants and non-participants, tabulation of services provided, and enumeration of the curriculum changes implemented will be made at the end of the 1972-73 school year. In addition, a survey of participants following graduation to identify the impact of the program is planned. As an ongoing part of the program, plans have been formulated to develop an advisory council composed of staff, students, and parents, and ad hoc committees which will be an integral part of the feedback and evaluation.

Plans for the future are contingent on funding. If the funds are available, expansion of all facets of the program would be undertaken since tentative and early results appear positive.

Career Exploration: Executive Internship Program

The Executive Intern Program in Hillsborough County, Tampa, Florida enables high school students to spend a full semester with a senior official in government, an educational or cultural institution, a private civic agency, a foundation, an agency providing direct services to community residents, or some other organization with broad public interest. This program was developed as a cooperative effort between university and public school personnel under the guidance of Dr. Dorothy Sisk.

An Executive Intern is a high school senior capable of assuming a mature staff role in an organization. The program seeks applicants who may have demonstrated leadership and initiative in their schools and communities, special talents and skills of value to particular sponsors, or a capacity for creating new solutions to problems, and who are mature, sensitive, and self-aware.

The program is currently involved with seventeen seniors who have been released from February through May to participate. They spend a full working day with their sponsor as if they are an actual employee. Transportation for these students is provided by their parents and the current financial investment of Tampa, Florida, is primarily the salary of the coordinator of the Executive Intern Program. Executive Interns are selected by actively seeking application following initial identification by their counselors in their respective high schools. Each counselor attends a seminar wherein the Executive Intern Program is described and the qualifications of an Executive Intern are explained.

Applicants referred by their high school principals are screened in an intensive interview. Those who qualify then meet several potential sponsors, enabling both sponsors and prospective interns to explore various options before making commitments. Both applicants and sponsors then indicate their choices and final pairing is done by the program coordinator.

The objective of the Executive Internship are broadly educational. The program introduces high school students to concepts of management and service delivery and to the broader urban milieu through close association with effective leaders, human service professionals, and community residents. Interns refine their social and intellectual skills by relating to a variety of adults, writing reports, becoming precise in their analysis of policy issues, organizing community-based programs, and actively initiating their own learning experiences. They gain specific knowledge about budget, personnel administration, organizational development, program planning and implementation, delivery

of services to clients, and the assessment of program results and policies. In the process, Executive Interns can also explore possible career options and help to serve the community.

The feedback from the current sponsors indicates that the Executive Intern can and does make a positive contribution. Through Executive Internship the students are becoming aware of the decision-making processes that are behind the everyday functioning of our society. It is anticipated that this program will continue next year.

Middle Grades Career Exploration Institute for Teaching Children with Exceptional Ability

Charlotte - Mecklenburg Schools
Charlotte, North Carolina

The impetus for this program was a direct result of state interest and direction being coordinated with local desire. Unlike many states, North Carolina assumes the major responsibility for funding public education. In 1971-72, the state contributed 68 percent of the funds expended on public education. This amount of dollar source is reflected in state direction and control of the public schools.

Therefore, in 1969 when Career Education was listed by the North Carolina State Board of Education as a top priority in the public school system for all children, the Division for Exceptional Children; Gifted and Talented Section responded with concern for the bright child in this area. By 1970, even though In-Service Institutes for Secondary Teachers relative to gifted students were being conducted in connection with the Governor's School of North Carolina no career education awareness or exploratory ideas with the target of gifted children were being developed.

Through the cooperative efforts of state leadership and the local leadership of the Charlotte-Mecklenburg School System with help from the University of North Carolina, a Middle Grades Institute for Teachers of Gifted and Talented dealing with career education was developed. Federal Occupational Education funds were utilized 100% and thus certain regulations were necessary including the fact that no occupation leading to a baccalaureate degree could be explored. This institute took place during the summer of 1972.

The actual planning involved specialists from gifted education, consultants from vocational education, and a specialist from the area of human development and learning plus leadership from the local educational agency. Community involvement included parental interest particularly in providing transportation and businesses who gave services.

The target population was actually middle grade teachers of bright children. The design involved using a racially balanced group of fifty-one children who attended morning sessions for three weeks. Selected teachers participated for five weeks and used the first and fifth weeks and the afternoon of the second, third, and fourth weeks for in-service work on aspects of career education.

Content was delineated by selecting from the fifteen Career Clusters the clusters of Media and Communication, Manufacturing, Construction, Health Careers, Hospitality and Recreation, and Marketing and Distribution for detailed study. Techniques of teaching including the inquiry method and understanding the bright child in a career oriented learning situation were explored.

Use of field trips for students and teachers, interest centers using tools and the development of teaching units which resulted in

the publication of Hands-On-Career Exploration for Bright Students were special features of the program. A secondary component of the plan was a series of fifteen one day workshops to be held throughout the state on Career Education for Bright Students in the Middle Grades using the institute teachers as leaders.

The project leader identified the following as the basic assumptions of the program:

1. Career Education should be for all students.
2. Academic and occupational areas can be interlocked in curriculum.
3. Gifted children have special needs not being met in the regular or career exploratory programs.
4. All people have a need to see the value of work not specifically related to their career goals.
5. Others, teachers and children, would benefit from this program through the publication of the units and the winter series of workshops.

The objectives of the program were essentially in two areas - those for teachers of gifted students and those for the actual students involved (51 out of an estimated 20,000 state-wide). It was desired that teachers throughout the state would 1) gain experiences in learning about gifted and career education at the middle school level, and 2) profit from the publication which would result from the Institute. Relative to participating students, the objectives were 1) to give them an insight into the world of work, and 2) to assess any value system change which occurred after being in the program.

Assessment procedures relating to student objectives involved pre and post tests administered to participants to evaluate value changes. Newly developed instruments, "Work Temperature" and "Would You Like to Be A" preference scales revealed several interesting changes but no statistical analysis was available and the data were not used to assess any pre-determined hypotheses. Teacher objectives were evaluated from the standpoint of actually producing a publication, Hands-On, and by teacher evaluations of individual workshops and the institute.

Since this was a planned five week summer experience plus extended one day workshops, the program is finished. However, another proposal will be submitted for 1973 for a program which is to be four weeks in duration and will explore two clusters in more depth.

Section E: Implications for Curriculum Guidelines in Career Education for Gifted and Talented Students

Chapter IX -- Policy Considerations in Career Education for the Gifted and Talented

Chapter X -- Additional Viewpoints on Policy Considerations in Career Education for the Gifted and Talented

Chapter XI -- Curricular Considerations in Career Education for the Gifted and Talented

Policy Considerations in Career Education for the Gifted and Talented

Introduction

Policy for education involves timeless concerns within a context of change. In the earlier part of this century, as society more visibly evolved from rural, agrarian forms of associated life to more urban, metropolitan forms, educators were encouraged to adapt schooling to the dynamics of urban and industrial expansion. An important characteristic of this period of educational thinking was an awareness that disruptive social change was diminishing not only the scale and productive energies of local communities, but also their educational capacities. The family, church, immediate milieu, and other community agencies were increasingly losing their power to assert control over the young and to provide for much of their education. Mobility, specialization, increased population, and bigness were all contributing factors which led educators to seek a new understanding of the distinctive function of the schools. To preserve the traditional values of democracy within an industrial society, school people were urged to transform their schools into embryonic social communities and to assume many of the community's educational responsibilities (Kimball and McClellan, 1963, p. 104). It is not the purpose of this paper to detail this period of American educational history. It is mentioned for the perspective it provides on our current situation, for what we are experiencing today is still further social evolution, from an industrial to what several theorists are calling a postindustrial

society (Bell, 1968, pp. 158-161), one notable feature of which is the community's recovery of some of its educative capacity. Educators are accordingly addressing themselves to the task of defining the distinctive role of the schools vis-a-vis this new capacity.

The educational concerns, however, are timeless: how can educators portray the world in which students will live, work, and play in such a way that its peculiar benefits and costs will be confronted, understood, and appreciated? How within the context of a given society can a genuine sense of community be achieved? How can not only the young be properly initiated into society, but also how can adults caught in the midst of change be helped to cope with it through continuing and adult education?

It is clear that to cope with the problems of postindustrial existence there will have to be both a commitment to perennial learning (Smith, 1968) by all persons in the society through the school years and beyond, and a high degree of social inventiveness regarding the ways in which schools and communities can fulfill their complementary educational responsibilities. The dual commitment of the American public to universal education and to excellence further implies that educational policy must give attention to both the less and more talented in the population. Career education, though still in its formative stages of conceptualization, holds potential for dealing with some of the major problems facing education during the last third of this century. In slightly different terms, education under the aspect of careers may well provide a unifying concept for education in a postindustrial era. It centers attention on a crucial consideration for educational policy: What kinds of careers will persons pursue in postindustrial society, and what are the necessary dispositions needed to pursue them? That is, what kind of career

orientation is required for those who will live in a world in which the notions of work, leisure, and play will be problematic? Career education further seems to hold some promise for incorporating the best of recent educational theory as well as a variety of new educational inventions. With this brief background, the major questions of this paper may now be addressed.

Career education can be divided roughly into three phases: education for career awareness, for career exploration, and for career preparation. The public has been remarkably generous in providing opportunities for career preparation for the highly paid professions, e.g., physicians and professional athletes, and until recently appeared willing to recognize some of its responsibilities for career preparation for the adult poor. It has assumed little responsibility for developing career awareness or for career exploration among youth of low socio-economic status. Nor has the public assumed responsibility for career preparation in service fields associated with low remuneration. If it may be assumed that gifted and talented people exist at every socio-economic level, that gifted and talented people are needed in low as well as high remuneration occupations, and that the careers of the gifted and talented are properly society's concern, then a broad scope of career education deserves serious consideration.

This paper attempts to set the stage for a full consideration of career education of the gifted and talented by exploring some of the important policy considerations which will determine the direction of such career education and the vigor with which it is pursued. It assumes that a primary policy question in career education for the more talented portion of the population is the

role of the public in making career education available for these talented and gifted individuals. The discussion is organized around a series of questions:

a. What are "gifts" and "talents"?

b. How should gifts and talents be identified?

c. At what age should career education be provided?

d. Should the gifted and talented be segregated in career education programs?

e. Who should pay for career education?

These are by no means all of the policy questions which can and should be raised, but they may be of service in structuring a broader view of career education.

What are "Talents and Gifts"?

It may be that the terms "talents" and "gifts" suggest too narrow a range of behavioral phenomena. Traditionally, talent was almost always assumed to imply unusual artistic and creative performing ability, although just after Sputnik we began to hear a great deal about the academically talented. In identifying academic talent I. Q. and verbal ability loomed large. Then studies of creativity began to show that intelligence and creativity are not always highly correlated and I. Q. was accordingly accorded less pre-eminence as the indicator of unusual ability. Nonverbal and nonacademic abilities were also considered worth examining. In brief fashions in talents change. Career education can perhaps make an important contribution to the literature on the gifted by suggesting that talents are distributed throughout occupational clusters and fields.

What would one look for in searching for occupational talent? It is difficult to say, although the question deserves more attention than it has received. Itseems reasonable to suppose, however, that curiosity, bents, inclinations, proclivities, flairs, sensitivities, dispositions, etc., will probably assume different forms in agricultural, industrial and cultural occupations. Indeed, if some theorists are correct, the fundamental impulses, purposes, aims, and interests in technological and scientific domains are quite at odds with dispositions in cultural domains (Levi, 1970), though occasionally a person embodies a bent both for empirical research and poetic expression. An agenda for research into occupational talent would thus include careful examination of interests and curiosities displayed across occupational fields.

It also seems fairly clear that the awakening of interest and the display of talent will in many instances be functions of formal study. For example, a learner who in his formal study has developed some understanding of industrialization may, given the opportunity for career exploration in his community, discover processes, interdependencies, and systemic relations that might otherwise have gone unnoticed. The same would hold true for health, legal, and cultural studies. Intelligent career exploration in cultural fields, for example, might well rid the learner of aesthetic stereotypes, stimulate latent talents, and result in the development of new dispositions. Important inventions and breakthroughs, that is to say, have usually been made by persons with well-stocked minds, just as problem-solving is at its best in a mind that has solved many problems.

Perhaps the most radical shift in thinking about talents has come during the past half-century with the introduction of the concept of efficiency into our view of talent (Haber, 1964). Career education suggests that every occupational cluster (not necessarily every occupation) has talented individuals and that the continuance of every occupational cluster requires the identification and development of talent. The development of talent is facilitated by educational and market mechanisms which allow capable individuals to move vertically to more demanding occupations (ladders) and to move laterally to occupations which require different interests and capabilities (lattices). Every individual is seen as having talents which need to be developed, with the talented being those who have the greatest measure of native ability in one or more of a very wide variety of performance. Giftedness is seen as a measure of the efficiency with which the individual can develop innate talents. But these talents can be developed fully only if society provides settings conducive to this goal. At the same time, different careers require different combinations of talent. When the preparation for the career and the career itself provide maximum opportunities for job satisfaction, maximum returns to the individual and to society may be expected.

This career education view is very different from the elitist concept that society should identify only the most "important" talents and should select for development only those few individuals whose genetic and environmental background offer maximum probabilities of high success. Career education emphasizes the value added by education to society and to the individuals in that society. Elitist education emphasizes the quality of only the top few products of the educational system.

Equally important is the concept of the dignity of all productive work. Work which is interesting and challenging to one person is boring to another, and frustrating beyond endurance to a third. Career education holds that each productive job can be designed to be interesting and challenging to some fraction of the populace. The interest and challenge of each job should be judged by the incumbent and not by an elite who tend to judge all jobs in terms of what would be satisfying and challenging to them. The relationship of the developed talents of an individual to the demands of that person's job is the prime determinant of job satisfaction. But jobs are not immutable. They are changed by the persons performing them. Moreover, we are concerned not just with the present job, but with the individual's career, which ideally involves the efficient movement through a succession of jobs, each of which ideally is more personally satisfying than the one which preceded it. A talent which is developed will cause some jobs to appear less attractive at the same time it makes other jobs appear more attractive.

In this respect, if not necessarily in others, the talents of a chef may be as important as those of a novelist. The talents of a chef and the degree of their development are prime determinants of job satisfaction in a number of culinary occupations. It is of course difficult to place a relative value on different talents in a given society, and it is perhaps even more difficult to place relative values on talents in different societies. And it is almost impossible for society to tell an individual which of his or her talents should be personally valued and which should not. This can be seen as an argument for the development of any ability. It is that, but it is also an argument for a system which allows the most gifted, the most

able, and the most talented to rise as rapidly as possible to the level within each occupational cluster which will allow them the maximum satisfaction and the maximum contribution to society.

How Should Gifts and Talents be Identified?

Other papers in this series deal carefully with the identification and development of gifts and talents of youth. Undoubtedly this is the most crucial time for these tasks. But youth are a minority in our population and locating and honing the talents of adults are also important. We have failed to identify many talents in the past due to inadequate programs for youth. However, even with the best conceivable means of finding and nurturing gifts and talents in youth, we will need to develop programs for adults to remedy our mistakes and to capitalize on talents which become evident with maturity. There is also the need to develop talents which were identified early but which could not be pursued until the interests of the individual changed.

Most gifted or talented people have the capacity to succeed in more than one set of related occupations. This gives them the capacity for more than average career flexibility, assuming that career education is available to them. But because they are likely to have unusual interests and capabilities, a range of career education opportunities which might be adequate for people with average capacities is likely to be too narrow for the unusually capable. At the same time, however, many of them are capable of independent study with only minimal direct help. It is possible that career counseling, advice, and instruction may be provided satisfactorily through telephone or mail correspondence with capable career counselors and educators.

As to who will do the identifying of talent (other than the talented individual, personally), this will depend on a given situation. Where opportunities for career exploration in the community are sparse, teachers will doubtless assume the major responsibility. But where the community can be involved, then all those who come in contact with learners may help in the task. For example, a student who has been participating in local legal or health activities may be noticed by an elder to have a special flair for identifying and cataloging information or a special sensitivity toward persons which may not have surfaced in the classroom, though, again, there might be a relation between the formal study and the bent displayed in the community activity in question. A variety of "instruments" might also be utilized. Not only standard tests but also testimonials, informal reports, inferences from learners' papers, conversation, etc., could be of value.

At What Age Should Career Education be Provided?

Most of the literature on career education suggests that there is a preferred sequence and age level for its three phases. It is generally agreed that career awareness should be fostered first (from early childhood to about age twelve), then career exploration from about age twelve to age sixteen, and finally career preparation from about age sixteen until the age of full-time entry into the labor force. If job dissatisfaction or the lack of employment opportunity interfere with occupational success, the latter two phases may need to be repeated several times during life.

There appears to be little controversy about the desirability of career education for adults. However, there has been, and undoubtedly will be again, sharp disagreements about the desirability of career education

for youth. Much of this controversy has centered on the age at which the different phases of the program should be provided.

Persons who plan to enter some professions such as law and social work are expected to start the third phase of career education (career preparation) after completing a baccalaureate degree at approximately age twenty-two. Similar expectations exist for a wide range of other professions, including teaching, library work, and business administration. Advocates of such postponement of career education believe that it increases the options open to individuals by providing them with a broad general education which will be useful in all parts of life, including career exploration.

The gifted and talented pose an anomaly here, however. In a field such as mathematics, the major contributions of gifted theorists have been completed during their early twenties, at about the age when it is often suggested that persons should begin to consider preparing for mathematics as a career. Even more striking is the age at which ballet artists and Go* players must begin career preparation if they are to be able to exploit their talents to the fullest. Age eight is late to begin preparing for either of these occupations, in spite of their vastly different requirements. (Ballet artists require the utmost in physical control, while Go players require accurate pattern analysis and prediction.) Thus career educators are being told on the one hand that they advocate beginning career preparation much too early, while on the other hand it is clear that, at least for some occupations, they advocate beginning career preparation much too late.

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*Go is an oriental board game superficially similar to, but more demanding than chess. It is played by both amateurs and professionals.

This suggests another anomaly. By definition, the gifted and talented can learn to perform more rapidly in their field of talent than can less able individuals. But in those occupational fields where talent is most commonly recognized and evaluations of performances are made most reliably, occupational specialization must begin at an early age, or the aspirant is almost certain never to achieve the success warranted by the talent possessed. A musician who begins to play at age twenty-two has virtually no chance of real success. The same is true of conductors, painters, football players, chefs, designers, photographers, actors and actresses, and many other similarly talented groups.

Is it possible that when there are fewer employment opportunities than there are talented people seeking success in that field, then occupational preparation must begin early to allow maximum opportunity for success? If this is true, then it would suggest that in those occupational fields where there is a higher proportion of employment opportunities in relationship to the number of talented individuals seeking success, it still would be true that, among the few talented individuals, those who began occupational preparation early in life would achieve the greatest success.

An alternative explanation may be that in occupational fields where performance is judged less reliably, factors other than early occupational preparation assume greater importance. For example, let us suppose that performance as a politician is judged with low reliability. If so, it might be possible that a talented person who learned at an early age to seek and to perform in elective office would have the potential to be a better office holder than one who had a particular family name, but the latter would win more elections. If performance could be judged with greater validity, the reverse might be the case.

Still another possibility may be that early occupational preparation is necessary for success in some, but not in all occupations. If so, it would be helpful to know why.

Until we learn more about the relationship between giftedness-talent and the desirable age of beginning occupational preparation, we will be unable to design the most effective career education programs for these unusual people. It is clear, however, that the simplistic notion that the longer we postpone occupational preparation the better is particularly inapplicable to the education of the gifted and talented.

Should the Gifted and Talented be Segregated in Career Education Programs?

Although there is no clear evidence of its educational effectiveness, most schools experiment more or less frequently with some form of segregated instruction based on the presence or absence of talent or giftedness. The most extreme examples are schools for the trainable (formerly, schools for the feebleminded) and schools for the intellectually elite (e.g., highly selective schools of science and schools of performing arts). Similar patterns exist within a given school where students may be separated on the basis of intelligence test scores, or on the basis of school curriculum, with assignments based primarily on criteria highly correlated with social class or verbal achievement. The most common reason for this segregation is the feeling of teachers that they can be more effective if the heterogeneity of their classes can be decreased.

Segregation is particularly likely to be practiced during the career preparation phases of career education. Indeed, some degree of segregation is virtually assured if the class is specialized and elective. Thus we find

that advanced art, music, and drama classes seldom enroll students with modest talent in these fields. Unfortunately, this also tends to result in segregation by social class, because occupation is one of our three best measures of social class, and because the other good measures (amount of education and material possessions) are closely correlated with occupation.

In the typical school program for career preparation, whether in high school or college, about half of the time is spent in general education and half in courses closely related to the occupational field. We have noted that segregation in the latter type of course is almost inevitable. Unfortunately, it tends to be extended to the former as well. Thus we find "chemistry for home economics majors," "physics for music majors," "technical report writing," and other types of general education which are not general at all. Segregation tends to be further extended to extracurricular activities, with clubs based on occupational or social class lines. The result is that the differences between the conservatory and the school of music in a university are more apparent than real.

It is a fact of life and careers that people of different social classes need to learn to work together. And, it appears to be a reasonable assumption that the greater the degree of educational segregation, the lower the amount of appreciation for the work of others and the lower the degree of ability to work together, on and off the job. This in turn suggests that institutions and curricula should be designed so that at least during the general education phases of instruction students from different socio-economic levels and from different career education programs should be in the same classes. The practical difficulties of accomplishing this in full-time specialized institutions suggests that this type of structure is less educationally desirable than a genuinely comprehensive school.

Who Should Pay for Career Education?

There are major differences in the ways that the charges for career education are distributed. Most economists argue that the costs of career education should be borne by the individuals and institutions benefiting from it. This is consistent with their views about charges for all types of goods and services, but the theory is easier to state than to put into practice. Moreover, it conflicts with long-standing custom in our society.

The gifted and talented are much more likely than others to enter the professions. Advanced graduate work in engineering and health occupations typically costs in excess of $12,000 per student per year. In a public institution it is common for tuition to cover less than ten percent of this cost, and the cost to the individual may be further reduced by fellowships, scholarships, and assistantships. For other professions the cost tends to be lower, but the student still pays only a fraction of the total cost. Even private, nonprofit college tuition rarely covers more than half of the cost.

Tuition is, of course, only part of the cost to the student. Other principal costs are "foregone earnings" (the money the student would have been earning if employed instead of attending school), and extra living costs imposed by the learning environment (books, fees, costs of living away from home, etc.).

In recent years the government has begun to provide noncollegiate opportunities for career education through the Job Corps and Manpower Development and Training Act programs. While these serve primarily the poor and the members of certain minority groups, MDTA was designed originally to

serve talented individuals who had become unemployed because of automation. In the early 1970's it provided retraining programs for unemployed aerospace engineers and scientists. Vocational Education, Vocational Rehabilitation, National Defense Education Act Fellowships, National Science Foundation Traineeships, and the National Foundation for the Arts and Humanities Awards are a few of the federal programs designed to provide advanced level career education in certain occupational fields for persons selected on some basis other than poverty or minority group membership.

In all of the programs listed above there is assumed to be a strong public benefit which justifies the public paying a substantial portion of the costs. This also justifies more or less public control of the program. The public determines the content of the program, the persons who will teach and be taught, and the extent and type of evaluation. There is less public control in private nonprofit organizations than in public institutions, but the public retains the right to step in if the nonprofit designation is abused.

The majority of people who receive pay for work spend almost all of their careers as employees. This has led some economists to suggest that the advanced levels of career education are of primary benefit to employers and should be paid for by them. The training provided by employers is undoubtedly essential to career education. Whether the trainee is a concertmaster learning the nuances of the new conductor's glances, or an automobile mechanic learning the ways in which the acoustics of his place of work affect the sounds of an engine malfunction, certain advanced career education activities can be conducted efficiently only on-the-job, and usually at the expense of the employer.

To be sure, the amount of training provided by employers is huge, though no reliable statistics are available. Surveys indicate that over half of all workers say they have had formal on-the-job training. Some estimates go so far as to suggest that from a fourth to a half of the labor force is in training at any one time. The smaller of these figures is far larger than the number of students in all secondary and post-secondary schools, public and private.

One of the most notable characteristics of training provided by employers is its rapid fluctuation in response to changing economic conditions. When profits decrease or hiring stops, most training stops. When sufficient numbers of trained individuals cannot be hired, training expands rapidly.

There is a general agreement that career education should increase the options of the trainee. Unfortunately for the good of society it is rarely in the interest of the employer to increase employee mobility if this mobility is likely to lead the employee to quit for a better job elsewhere. If the trained worker is employed by a competitor there is double damage: not only does the former employer lose his investment in training, but his competitor gains it. The competitive disadvantage brought about by inability to capitalize on funds invested in training has led to government-supported training cartels in England and France, and to joint employee-employer operated training schemes in the construction trades in this country. Large employers have a much greater opportunity to retain and profit from trained personnel than do small employers, since large, expanding firms can offer career mobility through their internal labor market. Consequently they can afford to offer career education which increases rather

than minimizes employee mobility. Moreover, the large employer has the advantage of economies of scale: he can operate larger training groups and employ more efficient instructors.

If the employer makes a profit, the government pays a major part of career education costs through reduced income taxes. Training is a cost of doing business and as such is fully deductible from income tax. A profitable company may pay 50% of its profits in state and federal income taxes. Thus, half of training costs are borne by government. Presumably this would be justified only if society and the company had approximately equal benefits, while benefits to the employee were near zero. Obviously this ratio is far from correct in many, if not most cases. The company will, of course, pass its costs on to the consumer if the competitive climate permits. Neither the government nor the consumer exercises effective control of the training being offered.

Things are different for the individual who purchases his own training. Consider the case of a person who works full time as a clerk to support his part-time study of the violin. Federal tax law is not attuned to career education, so it disallows any personal expenditure aimed at changing one's occupation. It does allow certain, but by no means all, expenses incurred in upgrading skills within an occupation. The paid symphony performer can deduct the costs of music lessons, but the volunteer performer cannot. Nor can the clerk who aspires to perform in the symphony.

If the economist is correct that the costs of education should be borne by those who benefit from that education, there is something anomalous about education in aesthetic occupations being borne largely by the individual while education in a profit-making corporation is borne jointly by government and the consumer.

The individual who seeks to purchase career education encounters another problem: one cannot be sure of the quality of the education being purchased. This problem appears to be most severe in education aimed at developing talents. Periodically, scandals appear in the media concerning schools of dancing, writing, and art. Such stories have the unfortunate effect of stigmatizing legitimate schools, for they lead the public to believe that low quality is nearly universal. Accreditation of schools is part of the answer, but a part of career education should include instruction in what accreditation can and cannot do.

The major difficulty in our answers to the question "who should pay for career education" is that we are not at all sure who benefits from it. Almost by definition the supply of gifted and talented people is smaller than the need. The supply, however, is frequently greater than the demand, and society responds to demand rather than to need. If the benefits to society from career education of the gifted and talented are greater than the benefits to the employer or the individual, then society should pay all or most of the cost. In practice, each pressure group seeks to get society to pay for, but not to control, the education it needs. The effectiveness of this pressure varies with the political power of the group. Upper class educational goals are more likely to be subsidized by the government than are lower class goals. The educational goals of employers are more likely to be subsidized than the goals of small, poorly organized groups of individuals.

An Illustration from Cultural Education

Perhaps the problem of benefits can be clarified by taking a brief look at the nature of cultural benefits. Cultural benefits may be characterized as those which derive from the experience of aesthetically interesting phenomena, both man-made and natural. In the former category works of fine art would loom large and in the latter natural beauty, although practically everything has some degree of perceptual interest. Let us say that all of the aesthetically valuable objects in a nation constitute that nation's aesthetic wealth, and that this wealth is shared wherever persons actually encounter works of art or appreciate natural beauty (Beardsley, 1970). The experiential fruits of such encounters are the actual benefits received. The aesthetic welfare of a nation may, accordingly, be estimated (not necessarily measured) as the total worth of all the benefits accruing from aesthetic encounters. Now what are the peculiar benefits of aesthetic experience? Apart from personal enjoyment, it is hypothesized that high-grade aesthetic experience may well provide a moral equivalent for violence, satisfy the human need for excitement and novelty, relieve tensions and quiet destructive impulses, achieve clarification and integration of conflicts within the self, refine perception and discrimination, cultivate emotional relations, develop cognitive, imaginative, and sympathetic powers, improve mental health generally, and provide an ideal for human life (Beardsley, 1958, p. 571-76). This is quite a list, yet cogent arguments have been set forth for each of them. Now such benefits are surely in the general and individual welfare, responsibility for which is provided for in the Constitution and our legal system. And anything in the general and individual welfare is a legitimate public expenditure. Since the public has not recognized

cultural responsibilities, however, foundations and philanthropic organizations have had to fill the gap, or, as previously indicated, individuals with cultural interests have had to pay a disproportionate share of the cost themselves.

An analogous argument holds for career education in general. It is the general and individual welfare that benefits when persons are effectively committed to social reality, to the worlds of work, leisure, and play; when they can cope with social change, including its psychic costs; when in spite of social pressures they can nonetheless continue to cultivate their potentialities. Acceptance of this way of looking at benefits and costs, however, may well require some readjustment in basic attitudes, i.e., from an attitude of narrow self-interest that conceives of services rendered only in light of immediate instrumentalities (a computer programming firm, say, which provides training for high school youth because the firm is in immediate need of programmers), to an attitude that understands services rendered as a contribution to career development generally. Whether business and industry will invest in this latter type of service without additional economic incentives is an open question. Whether society needs institutions which are charged with these responsibilities seems unquestionable.

Summary

This paper raises more questions than it answers about the problems of how the gifted and talented should be identified and assisted to develop their potentialities. It suggests that:

1. A major contribution of career education in this field may be the identification of talents which are not generally, but should be, valued.
2. There is greater public support for career education related to talents valued by upper socio-economic groups than for talents not viewed as important by this part of society.
3. The range of ages at which the career preparation phase of career education should be begun is much wider for the gifted-talented than for the general population.
4. The gifted and talented should never be entirely segregated in career education programs.
5. The gifted and talented in aesthetic fields are more likely to be required to pay the full cost of career preparation programs than are those who are gifted or talented in fields valued by employers.
6. The economic dictum that he who benefits should pay the piper is easier to state than to interpret. We often do not know who benefits by how much, and we often think that one group is paying when in reality costs are passed on to others.

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Chapter X

ADDITONAL VIEWPOINTS ON POLICY CONSIDERATIONS IN CAREER EDUCATION FOR THE GIFTED AND TALENTED

Given the full range of variables noted elsewhere in this publication, what implications can be drawn for career education pertinent to the gifted and talented: Some examples might include:

1. Career education programs should take the characteristics of the gifted and talented into systematic consideration in program planning.
2. Programs for the gifted and talented should address themselves to the acquisition of these students of career decision -making skills. They should also emphasize in a major way the career implications of the substantive content with which the- deal. This latter point needs some qualification. It is, in fact, likely that the programs specifically dealing with superior performance in some specific domain: e.g., music, performing arts, etc., have an impact on student career deliberations pertinent to that domain. It is less likely, however, that those career considerations are placed into a broad, comparative frame of reference. In other words, career development in its generic sense requires the informed weighting of alternatives and this, in turn, requires information not only about alternatives available but more specifically about each alternative. Students need to be able to place into perspective career ladders within certain fields as well as career lattices across fields. Perhaps, more importantly, students need to be helped to relate differences in levels of personal commitment, interests, and responsibility to career lattices.

This, of course, requires the creation of conditions by which gifted and talented students can deal with their evolving self-concepts, philosophical perspectives about life and work, and the reference points they will use to shape their decision-making styles.

3. Many of the existing programs for the gifted and talented are either community-based or, if school-based, extend into the community for resources. This suggests that responses to the gifted and talented which are confined to the capabilities within formal institutionalized schooling are unlikely to be adequate. While curricular modification and enrichment pertinent to career development themes are important and the use of simulation, gaming, and other rehearsals of decision-making are essential, the needs of the gifted and talented require more direct and intimate experiencing. Thus, gifted and talented programs have frequently accented opportunities for such students to observe or work closely with specific persons who have achieved professional eminence in the arts, sciences, or humanities. While perfectly capable of dealing with such matters in the abstract, gifted and talented youth seem to manifest a need for tasting the reality of different career possibilities through actual performance, experiementation, or other direct involvement with these foci. In a somewhat different context during the 1960's, it was this need to which many of the curriculum developers; the structure of subject matter in mathematics, sciences, foreign language, and other areas was reassessed; doing versus understanding was debated; and, cognitive operations

underlying discovery and intuitive thinking were prominent objects of research studies. These activities were premised on the conviction: "that intellectual activity anywhere is the same, whether at the frontier of knowledge or in a third-grad-classroom...the difference is in degree, not kind..." (Bruner, 1960, p. 14). This was partially a reaction to the conclusion that classroom discussions and textbooks focus on the conclusions in a field of intellectual inquiry rather than centering upon the inquiry itself. Career education offers some parallel to this perspective in its emphases upon not only discussing career development or decision-making but in arranging the conditions in and outside the school by which young people can experience these behaviors. Thus, apprenticeships, on-the-job experiences and other participatory opportunities with persons immersed in careers seems a natural expectation in career education for the gifted and talented.

4. The thrust of many of the programs for the gifted and talented is reinforcement of already identified superior performance. In other words, after a particular student has demonstrated unusual performance by some means and has been recognized by someone who can refer him appropriately, he is provided enriched or accelerated instruction to maximize his use of his capabilities. There are several problems with such approaches. One is the randomness with which superior students are likely to receive attention. Another is that identification or referral may occur too late for maximum effect. Different talents require different developmental periods. For example, identifying a young person as intellectually gifted or

as a potential leader in the latter years of junior high school or the beginning of secondary school may still provide adequate time for sufficient enrichment and stimulation of his skills. The same may not be true for talents in music, the performing arts, or psychomotor skills. Because of the extremely long periods of practice required in these areas and, at least in the area of psychomotor skills, the possibility of early peaking of physical capabilities, it may be necessary to identify such persons in the elementary school and provide pathways consonant with other forms of educational development by which their talents can be nurtured. Since many standard criteria for identifying the intellectually gifted are not pertinent in the case of the artistically, musically, or dramatically oriented child, considerable attention needs to be focused on behavioral ratings and other indices useful to teachers and parents for these purposes. For example, Kough and DeHaan (1968) have provided inventories of such characteristics related to specific categories of giftedness. McFee (1971) also has suggested some of the behaviors clearly identified with the talented in the visual arts which might be used for purposes of planning for this group. In addutuibm Wallach and Kagan (1965) have suggested that creative personalities often display such characteristics as social and symbolic stereotypes, impulsiveness, flexibility, self-direction, playfulness, as well as highly developed ability to daydream, reflect and analyze qualitatively.

These observations, while not all inclusive, suggest the nature of information available about persons identified as gifted and talented. The

vast array of individual differences precludes any formulation of a t-pical gifted child in any category but this does not negate the usefulness of the approach for purposes of gross screening. Given such a base various identification procedures can be developed for use at different educational levels and the relationship between categories of giftedness and available in or out of school arrangments can be determined. Because of the range of classifications of giftedness, the exploratory and developmental experiences required will have to be embedded in curricula -- e.g., perceptual training, open-ended problem-solving, design analysis, studying the lives of creative people -- and in the community as possible.

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Chapter XI

CURRICULAR CONSIDERATIONS IN CAREER EDUCATION FOR THE GIFTED AND TALENTED

To the conscientious educator, curriculum development represents a conscious effort to identify the why, what who, and how of the instructional responsibility. While career education curriculum has been the recent center of educational attention, close scrutiny indicates that much of this has been hastily constructed and remains thinly veiled basic "vocational" education. In addition, little has been attempted which actually differentiates curriculum in career education for different populations.

The domain of the institution involved in curriculum development - public, private, personal, or higher education - the level of the curriculum development - state, system, individual college or school, group of teachers, or individual teachers - and the reality of the political arena bear mention as factors which influence any curriculum development.

The development of a curriculum for a content area which is not a regular discipline but deals with a major fabric of life, career education, and for a selected segment of the student population, the gifted and talented, poses peculiar problems and necessitates special strategies. Any discussion of possible avenues to cope with such problems and to design such strategies must recognize and identify basic assumptions.

BASIC ASSUMPTIONS

1. Career education is a valued necessary part of education and identified as such by a large portion of the local society including the business and economic world, educators, parents, and pupils themselves.

Inherent within this assumption is that schools have not been presently providing competent experiences in this area and, therefore, must move to do so.

2. Career education for the gifted and/or talented differs in identifiable degrees from career education for other segments of the population. As each curriculum developer explores this assumption and necessarily defines for himself gifted and talented, a relationship between these definitions and how different the curriculum needs to be will emerge.

3. Career Education for the gifted and talented is a joint responsibility, not solely the responsibility of the educational institution. However, the public at large does expect the educational institution to take a leadership role in seeing that such experiences are provided. This does not mean that the major portion of such experiences must occur within the physical or legal realm of the educational institution itself.

4. The necessities for curriculum development must be provided. These include the avilability of human resources of time and energy, funding, the delegation and assumption of the responsibility for curriculum development, indicated interest from the appropriate authority level, authority and support for implementation, and a generally defined established purpose.

5. Special necessities must be provided for developing curriculum for the gifted and talented in the realm of careers. The central issue here is that those who are involved must work within a special framework of the definition of curriculum when planning for and with the gifted and talented. For these two groups represent not a group identified

by similar characteristics but a group identified by their differences and multipotentiality. Therefore, curriculum for such a group must:

a. plan to permit rapid changes introduced by the youth it serves
b. have a structure that results in little adult domination
c. offer experiences which permits a large variety of honest options
d. provid- for those whose talents are in a speciality area as well as for those who have no specialty
e. be little encumbered by the framework of bureauocracy
f. permit the very different to be served as well as the very acceptable.
g. not permit the mundane to be embellished so as to appear exciting or novel
h. be designed to serve the youth rather than to convenience the educational institution
i. recognize that the students are not the only ones being educated, but that the parents of the gifted and talented, the career community, the teachers, the administrators, and the general public as partners in the process are receiving new experiences and should be altering behaviors. The gifted and talented as questioners and reconstructionists will change others as much as others will change them.

To work within the framework of such a definition of curriculum mandates the avilability of expertise in careers content, in curriculum itself, in the gifted and talented arenas, and in knowledge of the local career community. With such expertise available, knowledge of what already exists can be ascertained. A careful examination of the value issues as discussed elsewhere in this publication can be made. It would be fallacious to begin curriculum development prior to such position discussions. Value clarifications must, then, affect any policy decisions and be reflected in any administrative or organizational decisions.

QUESTIONS TO BE ASKED

It now becomes apparent that certain questions needs to be asked by those developing career education for the gifted and talented. While no two developers will answer these questions in the same way, the answers should lie within a continuum and should reflect the individuality of each situation.

Who Should Develop the Curriculum?

The control, the outcomes, the values, the direction and the success of career education for the gifted and talented lie in the answer to this question. The diversity represented by those developing the curriculum will form a direct ratio to the openness and flexibility of resultant curriculum. For is only educators are involved, the outcomes will reflect the limits of their experiences, but if gifted students, the teachers of gifted and talented students, community agencies, employers, practicing artists, philosophers, and representatives from other educational domains are also included as a working part of development, then the curriculum will be forced to cope with the concerns of all and will reflect the central issue of the impact on and for the learners.

Additionally, the composition of the identified responsible group will shape the curriculum through its own process of cooperative endeavor which will provoke a built-in change process as evaluation becomes the responsibility of all segments.

Why Should Career Education for the Gifted and Talented be Different?

The characteristics of the pupil population of this group are distinct enough to call for differnetial educational planning. Individualization of education is a frequently expounded idea in current educational literature and is often confused with independent self pacing. Such con-

fusion carries over to the simplistic solution of providing for giftedness by permitting rapid acceleration through activites designed for all learners. However, in order to individualize for these types of students, one must take into account all of their unusual learning characteristics explored fully in the chapter on Individualization and Characterization of the Gifted and Talented. Notable among these are their unusual present learning capacity[1], multifaceted potentiality, creativity, curiosity, power and sensitivity of thought, and variety of cognitive styles.

Secondly, the anticipated social role of the gifted and talented cannot be ignored[2]. Lucito refers to gifted students as "the future problem solvers, innovators, and evaluators of our culture, if adequate educational experiences are provided."[3] Schooling for these creative contributions to society will require specialized career education provided by those most able to do so.

The reverse of this anticipated social role is society's responsibility for enhancing self-development. For those who possess gifts and talents so many possibilities exist at any time in life. As Gold says, "Narrow vocational specialization, a need of modern society, must be balanced with the roundedness of the Renaissance homo universalis."[4]

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[1]Ward, Virgil S. "Educating the Most Educable: The Nature and Significance of the Task," Conference on Educating the Highly Able, University of Maryland, February 1, 1965.

[2]Ibid.

[3]Lucito, L. "Gifted Children" in Dunn, L. (Ed.). Exceptional Children in the Schools. New York: Holt, Rinehart and Winston, 1963, p. 184.

[4]Gold, Milton J. Education of the Intectually Gifted. Columbus, Ohio: Charles E. Merrill, 1965, p. 23.

It seem obvious why differential experiences must be provided for the talented group. Often in-depth study for the development of muscial or dramatic talent is not available in public education. If talented students are to be assisted in early identification and systematic training of their particular abilities, educational experiences must be provided by professionals.

What Should be Different About Curriculum for Career Education For the Gifted and Talented?

It will be necessary to consider curriculum for the talented separately from curriculum for the gifted. Often students who are artistically or musically talented also possess superior intellects and, therefore, the total curricular planning for these students should reflect their unique abilities. However, for students who are outstanding in one or more of the arts, the curriculum needs to be adjusted to allow for the exploration and the perfection of their talents. High schools of music and art or of performing arts have frequently allowed for more concentration, training by professionals, and exposure to a variety of cultural benefits. Chapter on Exemplary Programs describes several such programs. Adjustments of this type have not usually occured before the secondary school. Career education offers the possibility of making these provisions much earlier and of involving the private and non-educational agencies in developing appropriate curriculum for these unique abilities.

Virgil Ward advocates two principles which are helpful in developing curriculum for the mentally superior students.[5] Initially he suggests the principle of inverted ratios which help meet the needs of gifted students.

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[5]Ward, Virgil S. Educating the Gifted: An Axiomatic Approach. Columbus, Ohio: Charles E. Merrill, 1961. p. 120.

First, he suggests that the ratio of the intellectually superior student's role in planning his own education should be greater than that of the average student. There should be many opportunities for independent study and research in line with the interests and abilities of the student. For career education this ratio implies providing materials and human resources and alloting time for exploring career interests and delving into the ideas related to possible occupations. Ward further suggests the ratio of content in the curriculum should be arranged to allow the gifted student a greater opportunity to extend into the general nature of all the chief branches of knowledge, leaving the exploration of particulars or in-depth study to individual areas of concern or interest. This broader examination should affect the exposure of the gifted to the many options and laternatives open to him. The last inverted ratio suggested is the ratio of abstractions, theories, principles, and generalizations to concrete sensory experiences which he feels should be "distinctively different from that appropriate and possible for the average child."[6] Consideration for this latter ratio would indicate considerable emphasis upon intellectual activity, critical thinking skills, and the promotion of tendencies toward creativity which should permeate all materials developed for career awareness, exploration, and implementation.

Ward also suggests the principle of "relative uniquesness" as a convenient guide to judge curriculum for gifted students.

> No proposed educational experience can be termed differential unless it distinguishes the educant and unless it points toward the anticipated social role for which the group as a whole are destined.[7]

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[6] Ibid, p. 126.

[7] Ward, 1965, op. cit.

What Content Ideas Should Exist Throughout Career Education for The Gifted and Talented?

Throughout the educational process, gifted and talented students should be exposed to basic concepts described elsewhere in this publication: the importance of work in our culture, the work ethic, the variety of career options available in each occupational cluster, avocation and vocation, and the relationship between academic content and various occupations. However, beginning at the early stage of career awareness in elementary school, gifted and talented students should be offered the opportunities suggested by the inverted ratio idea of Ward. For example, an interested group of bright students could be encouraged to debate the work ethic; an individual student could be permitted and assisted to explore an esoteric occupation such as spelunking; a talented student could be encouraged to compose a sonata or other musical creation, perhaps with the assistance of a professional musician from the community. For these students the curriculum should indicate many alternatives, the possibilities of changing occupations, the need for education for life's span, and the value and satisfaction found in creative and meaningful work. Career education is not a discipline per se. It differs due to its diversity, its continuous change and its broad implications so that as a content it is necessary to speak of goals rather than the specific substantive materials. Attempts to isolate career education content without integration can only result in artificiality. Proposed goals are:

For each gifted and talented student:

1) to set his own goals for exploration of "work" within the parameters of "self"

2) to probe possibilities which offer aspects of interest or arouse curiosity

3) to learn substantive material relative to careers content

For each teacher of gifted and talented:

1) to know the career implications of his discipline

2) to identify the motivation activities to reveal these implications

3) to encourage students to engage in exploratory activities relative to career implications

For each participating adult worker:

1) to recognize the changing aspects of his own career

2) to encourage students to openly and realistically participate

3) to provide adult su!port, expertise and response

What Relationship Will Organizational Structuve Have on Content Ideas?

Orangizational structure including that which is instructional in nature either helps or hinders the reaching of goals. Due to the very nature of giftedness and talent and to the broadly based purposes of career content, the structure must be used as a support rather than as an impediment.

All career content for gifted and talented must accentuate conceptualization and reality. Therefore, a simplistic organizational structure which permits instructional creativity while recognizing instructional responsibility and enhancing personal responsibility should be sought. The key role of structure is liberation rather than restriction.

What Process Will Be Used For The Actual Development?

Too often curriculum occurs through the lack of a process rather than being helped by a choice of process. Any basic curriculum book offers information on processes, but the important idea is that a process should be carefully chosen prior to engaging in such. This in no way will prevent frustration for frustration is a vital part of any process. However, proceeding through a chosen process will permit a balanced effort and will prevent a pedantic effort that produces a curriculum buide but no curriculum.

What is the Involvement of the Non-Educational Agency in Curriculum Development and Policy Making in Career Education for the Gifted and Talented?

Utilizing the idea of open entry/open exit education, gifted and talented students ideally would move in and out of the community for educational experiences which noneducational agencies would be better able to provide. The noneducational agency has on occasion, in the past, been involved in the educational enrichment of individuals. However, the diversity and depth of involvement implied in this broader concept of career education in and out of educational institutions would require a partnership which acknowledges the right of the noneducational agency to participate in decision making. A carefully established philosophical base and some guidance for procedural matters would have to be established. Several embryonic programs involving these procedures are described in the chapter on exemplary programs.

How Will Curriculum Be Evaluated?

Evaluation of curriculum efforts occurs primarily by the ones most affected - the learners. In a ripple effect, radiating from the learner outward, the next group who evaluates critically is the classroom teachers, followed by the parents of the learner and members of the career community.

While each of these groups will evaluate by different criteria, the most crucial ones are the learner's whose perceptions must indicate to him that:

1. He dictates his progress by his own efforts.
2. He is learning realities.
3. He has numerous career choices
4. He can make decisions relative to priortiy choices.

5. He can decide to make societal contributions and to contribute to change of society.

6. He can increase his uniqueness, particularly related to talent.

For the gifted and talented such evaluation criteria will be examined and expressed whether the curriculum recognizes and provides for it or not. Therefore, for curriculum to remain valid the evaluation process must focus on this prime area.

While the criteria for each of the other groups will be different, they will center primarily on the perceptions of that group as to how the learner thinks and feels and on how that group feels the curriculum has impinged on their own lives.

Therefore, all who are involved even slightly as casual community observers will evaluate. This evaluation will result in either approval or disapproval which grossly affects success. Every curriculum development process will need to develop procedures to capitalize on these evaluative occurrences or face oblivion in a short time.

DESCRIPTION OF ONE POSSIBLE MODEL

Basically all curriculum development processes should identify at least four stages: idea collecting, idea-formulation, idea dissemination, and idea verification and alteration. In other words, developers must collect data, use this data to make conclusions, disseminate these premises and use them, and then collect data again in order to evaluate and alter the conclusions.

To apply these stages to career education for the gifted and talented requires recognition of certain special needs.

(1) Idea Collecting

Each group affected by the proposed career education curriculum must

be given the opportunity to react to the question, "What do you want in Career Education?" This type of data must be collected by honest and reliable research methodology. For example, student input could be from a random sample of the gifted and talented population of the area the educational institution serves, be it elementary or secondary or post-secondary. The other part of this phase is the establishment of procedures to examine content possibilities from other sources, knowledge bases, and societal bases.

This stage must be accentuated by the absence of consensus activities. There should be no attempt to have these sources agree, but rather to have the developers listen and collect ideas.

(2) Idea Formulation

At this stage the developers must engage in honest brainstrorming. After identifying a point of view or philosophy, they must begin the decision making process relative to what, how, when, who, and why of instructional responsibility.

Since career education is a broad idea and not a discipline and the gifted and talented population is so diverse, decisions must focus on:

a. broad content domains of self, others, work, society, and the interrelationships of these domains.

b. organizational features which realize the greatest possible use from school and community resources.

c. instructional structure which sets outside limits, goals and as suggested in the previous question on content, broad guidelines, and which promotes individualization through choice.

d. feedback procedures to facilitate change and to permit continuing curriculum development.

e. in-service and pre-service education activities for all teachers and staff who will be involved.

If these are the decisions which are discussed then a working, honest, alive curriculum will emerge which helps but does not restrict, maintains its relevance but does not change for changes sake, and which is a plan but does not dictate.

3. Idea Dissemination

If previous assumptions have been met and true involvement of all segments has been achieved, then this stage is a vast broadening of a similar process. Knowledge of a curriculum effort leads to an identification with that effort. Identification results in commitment to that effort. Such commitment is necessary for all participants. Therefore, plans must include procedures to develop this knowledge which is the real impetus of implementation.

Who, then, must help in the dissemination of the curriculum plan and in its implementation? Three primary groups must have attention. They are:

a. local educational leadership whose understanding is mandatory.

b. careers community participants without whose cooperation career education is impossible.

c. the teachers of the gifted and talented students who are the real interpreters of curriculum.

Other groups who need to become knowledgeable and informed include:

a. parents of students involved.

b. all teachers and staff.

c. total community.

Any dissemination and implementation proceudre must provide opportuntities for all of these gr-ups to become informed. This mandates sufficient time for each group. For example, face to face confrontation is

important with adequate time for questions and understanding. Teachers must feel support from their immediate line authority and the total effort must feel support from the community whose expectations are being met.

Here again, specific procedures are too numerous to mention and each group of developers needs to develop its own. However, honest attempts must be made to reach all segments and encourage their support and participation.

(4) Idea Evaluation and Verification

Too often much curriculum development stops at the previous stage. It is developed and disseminated: it is done! People are the core of curriculum. Since people change daily, curriculum must change. Therefore, curriculum design must include procedures for evaluation through more date gathering and altering on the basis of these data.

As stated previously the crucial evaluation must be from the perceptions of the learners. This does not mean, however, that data from other sources are ignored. Procedures to facilitate data gathering relative to evaluation are developed as part of idea formulations. The use of these procedures begins as soon as the curriculum plan begins. These procedures are shared as part of the pre- and in-service training of teachers.

When the data is gathered, those responsbile continue to work as they did in idea collecting. Actually idea evaluation merges with and, indeed, becomes ideal-collecting and the process is repeated. Two facts emerge:

a. curriculum can not remain stagnant, and

b. as people, their local and at-large society, and expectations change so must curriculum. These facts are magnified when applied to talents and gifts which are extraordinary and to careers which change with society.

While the four stages of the process or model suggested are not unique, they must be a part of all curriculum development. Specific choices of procedures are governed by the level and domain of the educational institution involved. For example, a community college would institute different idea collecting than a public secondary school but both would need to provide for this step.

What Realistic Expectations Are Present For Career Education For The Gifted and Talented In The Immediate Future?

Whether career education for the gifted and talented remains a real issue which demands attention depends upon several present factors. These include:

1. The amount and volume of real concern on the part of the public. Is the need for career education valid?
2. The ability of career education educators and those educators concerned for the gifted and talented to identify and to communicate relevant needs to gain financial and public support.
3. The ability of the educational community to develop and maintain relevant programs.
4. The establishment of administrative structures which enhance curriculum decisions relative to career education and the gifted and talented which promotes community involvement.
5. The acceptance by the educational communit- and the career community of accountability for the programs instituted relative to their practical effectiveness.
6. The maintenance of a cooperative posture by all concerned.
7. The continuing support of the philosophy of the right of an individual to be provided with honest options based on his needs.

Several observations emerge. First, the more appropriate the program and the more skilled the staff, the wider the range of accomplishments of gifted and talented students. This mandates an increasing amount of individualization and prohibits much of a group approach. Administration of such activities gets more comples. Thus, the more successful career education for

the gifted and talented becomes, the less like traditional school it will become. The central issue then comes to the fore - are educators, parents, laity, and students able and willing to accept these types of experiences as educational?

If career education is a valid concern, if the gifted and talented have differing needs in this area, and if educators are able to respond competently, then career education for the gifted and talented will develop as an integrated, inter-disciplinary set of experiences planned for individual human beings.